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Issue 74 - June 2012  
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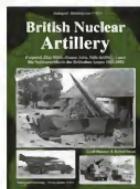
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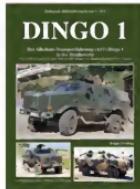
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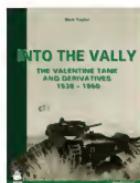
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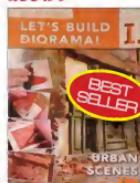
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## TAMIYA RE-RELEASES

Tamiya has announced that it will re-release two of its classic Japanese military models:

- Item 35095 1:35 Japanese Type 175mm Self-Propelled Gun
- Item 35137 1:35 Japanese Medium Tank Type 97 (Late Version)

The Type 97 medium tank was a significant tank used by the Japanese army during WWII. It featured a low silhouette and was armed with a 57mm main gun and two 7.7mm machine guns. As it was initially developed for infantry support, it was ineffective for anti-tank roles and received a number of upgrades during its production. This late version featured a more powerful 47mm gun mounted in a larger turret and an improved engine.

The Japanese Type 175mm self-propelled gun was the first self-propelled gun developed by the Imperial Japanese Army during WWII. It used the chassis of the successful Type 97 medium tank with the turret replaced by a Type 90 75mm field gun in an open superstructure, for the Japanese army throughout the war.

We will have more information and reviews closer to release.

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)



## TANKFEST 2012

Tankfest 2012 will be held at the Tank Museum, Bovington, on 30 June and 1 July, bringing the story of tanks, tank crew and soldiers to life...

This year is Tankfest's 10th Anniversary and visitors can expect a bigger and better show than ever before.

On Saturday 30 June, Tankfest will be open until 21:00, giving visitors even more time to browse

trade stalls and living history encampments.

Historic vehicle displays will include vehicles making their show debuts, with a number of old favourites returning to the arena.

Your Tankfest 2012 ticket includes a free annual pass - so you can visit The Tank Museum as many times as you like in a year\*.

This year, your annual pass is valid from the date you purchase your Tankfest ticket - so you can

visit before or after the event at your leisure.

Tickets are available to buy now with early booking discounts. More information will be available as soon as details become confirmed.

Put the date in your diary, and check out the Tank Museum's website for the latest news on Tankfest 2012.

Thanks to Tank Museum Bovington for the information [www.tankmuseum.org](http://www.tankmuseum.org)



## RESICAST NEW RELEASES

Resicast has been busy as usual with a plethora of new 1:35 scale kits, conversions, accessories and figures. These include:

- 351224 CONGER Mine clearing device 1944. Conversion for Tamiya Universal Carrier. Price = €59.50
- 351223 Light recovery trailer 7,5ton. Full resin kit. Retail price = €65.50
- 352340 Burnt out and damaged UK jerrycans (24 jerrycans). Retail price = €15.50
- 355631 "Halte ... une fois!", Belgian soldier 1940. Retail price = €12.50
- 355636 Medic with stretcher. Optional head provided. Retail price = €12.50
- 355637 Officer leaning. Optional head and arm included. Retail price = €12.50
- 355637 "Come on!". Optional head included. Retail price = €12.50

Resicast kits, accessories and figures are available online from their website [www.resicast.com](http://www.resicast.com)



## SQUADRON EAGLEQUEST XXI - JUNE 21 - 23

Squadron EagleQuest XXI will be held from 21 to 23 June at the Embassy Suites Outdoor World Hotel near Dallas Fort Worth airport.

Squadron EagleQuest has its origins in Mastercon, which was established by VLS in 1992 as a yearly competition and social gathering over the American Labor Day weekend. Squadron continued the tradition following its acquisition of VLS in early 2007, moving the event to Dallas, close to its head office and warehouse.

EagleQuest includes an open model competition in a wide variety of categories, plus seminars and presentations from special guests. Contestants will be rewarded with

the opportunity to visit the nearby Squadron warehouse, where you can browse the aisles with a shopping trolley and buy direct on the day. The show is rounded out with a presentation banquet on the Saturday night - always an enjoyable function. I am very happy to report that I have been invited to attend EagleQuest XXI, and I will look forward to meeting Model Military International readers who may be there.

Having attended the 2010 show, I can confidently advise that this is a very friendly and well-organised event. For more information, visit Squadron's website and follow the links from the EagleQuest XXI banner [www.squadron.com](http://www.squadron.com)



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The T-54-1 was the first model of the T-54 series. Note the turret with prominent shot traps at the front and sides, and the wide mantlet, developed from the T-34/85. This model usually had fixed machine guns in armoured boxes on the front mudguards, but here fuel tanks have replaced them.



## T-54/T-55 MAIN BATTLE TANK FAMILY

Bruce Culver discusses the development, attributes and operators of the iconic T-54/T-55 Main Battle Tank family.

The T-54/55 family of main battle tanks (MBTs) holds the distinction of having been built in greater numbers than any gun tank in history, a record that will no doubt never be beaten. Total production is believed to be between 86,000 and 100,000 examples. In addition, the tank in various guises has served in greater numbers and for longer than any other MBT, and nearly all of the dozens of operators through the years have undertaken at least minor

modifications to the basic vehicle, making it probably the most modified AFV in history.

For all these reasons, plus the fact that T-54/55 tanks will be extending their record of longevity well into the future, this family of Russian MBTs must be considered one of the most important fighting vehicles of the last 50 years. They have served in virtually every corner of the world, on most continents, and have fought in more wars than any other type of tank. They comprise an active

or stored reserve in a number of countries, and it is likely that hundreds will be available for sale to additional users.

### THE NEED FOR A NEW STANDARD TANK

Although the T-34 medium tank served successfully in the Great Patriotic War (World War II), the Russians were mindful of its disadvantages and tried for much of the war to improve and upgrade the T-34 to fight successfully against improved German tanks, while also reducing costs and

complexity. In this they were largely successful, but the basic disadvantages of the core design could not be corrected due to the pressures of wartime production. It would take a new tank and a new concept.

There were two major problems with the classic T-34. One was the Christie suspension, which required large internal towers for the coil springs that reduced interior room considerably. The Christie coil spring suspension also was prone to a rolling pitching motion



A column of T-54-2 early production tanks shows the development of the new turret. The wide mantlet of the T-54-1 was replaced with a narrow "pig snout" mantlet and a new turret front with no shot traps.



A T-54A testing an early snorkel system for deep water wading. The tank had to be completely water-proofed as well, but when prepared, it could traverse up to 5 metres of water, allowing it to cross rivers and other bodies of water.

The T-54B introduced the Luna infrared (IR) fighting system for night operations. This example, converted from a T-54M, had the IR searchlight on the turret front and a second searchlight on the commander's cupola. Most T-54Bs mounted a 14.5mm heavy machine gun for the loader.



The T-54B introduced the Luna IR searchlight. This early example didn't have the light for the commander's cupola, but it had been fitted with the new fume extractor at the end of the 100mm gun barrel. This device drew fumes from the interior after firing the main gun.



The T-55 was redesigned to protect the crew from radiation in nuclear warfare. The open ventilator on the turret roof was deleted, new road wheels appeared, and the bow machine guns in armoured boxes were replaced by a single gun firing through a small hole in the glacis, seen here just below the splash board. The 14.5mm turret machine gun was deleted as being ineffective against jet aircraft.

moving cross-country, making it extremely difficult to hold the main gun on a target while moving. The Russians favoured the torsion bar suspension used in the KV series of heavy tanks, but an attempt to produce a new medium tank with a torsion bar suspension, the T-34M, was suspended due to the early war emergency situation. Russia needed as many tanks as could be produced, so many promising experimental programs had to be put off until later in the war.

A final problem was the height

of the T-34 and the KV series, which limited the armour they could carry without overloading the chassis or power train. The only way to increase the armour thickness was to reduce the height and thus the size of the new tank. This problem was also faced by the United States and Britain as they began designing new tanks to replace their early war models. The key to solving the problem of armour protection and vehicle height was a concept known as space engineering. In this approach

the final size and shape of a tank's hull and turret were based on the volume needed to accommodate the crew, power train, and main gun and ammunition. In the US, space engineering helped design the T20 tank series, which ultimately led to the T26E3 (later M26) Pershing heavy medium tank. In Britain, it led to the design of one of the best tanks to come out of Britain: the Centurion. And in Russia, it led to the development of the successor to the iconic T-34: the T-44 medium tank, the

ancestor of the T-54/55 series.

The T-44 started as a concept in late 1943 at the KB-520 design bureau headed by Aleksandr Morozov at the Uralvagon Zavod (UVZ) tank plant in Nizhni Tagil in the Ural mountains. The previous design to improve on the T-34, the T-43, had not been successful although small numbers were built and saw action. The main failing was the lack of a larger main gun - the T-43 carried the same 76.2mm gun as the T-34 - and the army wanted a bigger gun, leading to the ►



# Think Tank - T-54/T-55 Main Battle Tank Family



Russian infantry on this T-55 mimic scenes from WWII. In the 1950s, Russia lacked a useful armoured personnel carrier and tank-borne infantry was the most common method of accompanying the tanks with supporting troops.



This later T-55A was fitted with the turret mounted heavy machine gun, now considered useful for combating attack helicopters, a new enemy on the battlefield. Note the external radiation shielding on the commander's cupola that identified this tank as a T-55A.



This abandoned T-54B, early T-55 or Type 59 illustrate the difficulty of identifying some of the early models from each other. This tank was knocked out on the "Highway of Death" during Operation Desert Storm in 1991. Part of the base for mounting the turret heavy machine gun was present, but these were often added during periodic rebuilds if the tanks didn't have one.



A T-54, T-55 or Type 59 (foreground) and a T-55A (rear) lie destroyed on the "Highway of Death" in Kuwait during Operation Desert Storm. Note the very poor condition of the paint, very commonly seen on Iraqi tanks. Because of the massive air attacks during ODS, many crews abandoned their vehicles and fled on foot or by car.



The first two tanks in this view are Type 59-II modified copies of the T-54A produced by China. These tanks were seen at Shenyang, with the British L7 105mm gun replacing the Russian 100mm weapon. There were also internal improvements, but this tank was very similar to the Russian T-55.

◀ adoption of the T-34/85 in early 1944. This model served through the rest of the war, but still had the problems associated with the essentially pre-war T-34 design.

## NEW DESIGNS

The new design to replace the T-34 was called the "Obiekt 136" and featured a torsion bar suspension. But the biggest improvement was the hull design. By removing the bow MG gunner and rearranging equipment – especially placing the engine transversely in the rear hull - Morozov's team was able to reduce the height of the hull considerably, allowing much thicker armour for better protection with little increase in weight. The hull

glacis plate was now 75mm thick and more steeply sloped, a major increase in protection.

The turret was based on that of the T-34/85, but could be lower because of the low engine deck on the new hull. It mounted the same 85mm gun used in the T-34/85, and the ZiS-S-53 model of the 85mm gun was chosen for the production model, which was accepted for service in 1944. The main deficiency was the shot trap formed by the front of the new turret, but this was no worse than the T-34/85, and the turret front was 90mm thick.

The T-44 proved to be a very effective tank, nearly as capable as the German Panther, but only

2/3 the weight and considerably more reliable. The T-44 was produced in the newly liberated Kharkov Locomotive plant, the original location of the KB-520 design bureau. Over 1,800 were produced by the end of the run in 1947. While most T-44s mounted the ZiS-S-53 85mm gun, prototypes had been made using the 122mm main gun of the IS-2. The 122mm gun was considerably too big to fit comfortably into the T-44 turret and was reserved for the IS series of heavy tanks. The 100mm gun from the SU-100 was also considered, but the long ammunition was too big to use in the limited interior space.

Nonetheless, the 100mm LB-1

and D-10T guns were favoured, so the design of a new turret became the next step on the road to the T-54. A new prototype, the "Obiekt 137", began in 1945, called for a larger turret to accommodate a 100mm gun and the required ammunition stowage. There were several models of the prototype series, each with a different turret. The new design in development was designated T-54.

## THE T-54

The T-54-1 had the earliest turret, which had a number of shot traps at the front and the rear of the cast turret shell. It had a wide mantlet similar to the T-34/85 and T-44, and also many production



This T-55A of the Egyptian army had the anti-radiation external protection, and had been upgraded with an improved fire control system using a laser rangefinder mounted alongside the main 100mm gun. With the shifting alliances in Egypt's recent history, the T-55s in the army's inventory received both Russian and western upgrades.



Uganda received assistance from Libya in its war with Tanzania, and this included a small number of T-55A tanks. This tank engaged against Tanzanian forces, and had the Luna IR system searchlight and a laser rangefinder for the main gun.



The T-55AD used one of the most secret weapons mounted on the T-55A, the Drozd active anti-missile system. This was intended to destroy incoming anti-tank missiles and operated over very short ranges. Here the launch tubes are empty. photo by S. Dukachev



Finland received T-54s and T-55s starting in 1960 and ending in 1967. This T-55 is painted in a standard segmented camouflage scheme and was in service for many years. In the 1990s these tanks were extensively upgraded, but have now been replaced by the T-72. The last few dozen examples were placed in long-term storage.

This T-55AD, fitted with the Drozd active protection system, shows the missiles installed in their launch tubes. The Russian army decided the system was too expensive, but the Naval Infantry.



defects. The main armament was the 100mm D-10T. The second version, the T-54-2, introduced a new turret with a narrow, rounded front shape and a "pig's snout" narrow mantlet that eliminated the front shot traps, with an overhang at the rear. This turret proved to be popular and more production facilities were brought on line to build T-54s. The final turret design was similar to that of the IS-3 heavy tank, a smooth cast turtle shaped shell with no shot traps front or rear and the narrow mantlet forward.

The T-54 entered army service in 1947, but design and quality problems caused the premature shutdown of production until

more than 1400 defects could be corrected. In 1952, the final turret was adopted and the iconic shape of the T-54 was established. This first model with the final turret was the T-54 Model 1951. Production tanks had heavier armour than the prototypes, 90mm on the glacis and 120mm for the turret front.

Aleksandr Morozov, established back at the Kharkov Locomotive works in the KB-520 design bureau, wanted to design a completely new advanced tank and eventually he was allowed to begin this process. As a result, he delegated the Nizhni Tagil UVZ design bureau under Leonid Kartsev to continue the development of the T-54.

Kartsev's first project was the addition of a gun stabilisation system. The prototype "Obiekt 137G" was developed to install a gun stabiliser and add other improvements, among which was a fume extractor for the main gun to improve turret ventilation, and also snorkel equipment to allow fording rivers up to five meters deep. The "Obiekt 137G" was accepted as the T-54A in 1955, and production actually began before the official acceptance. Poland and Czechoslovakia built the T-54A under license, and China also built this model as the Type 59, selling thousands of them to other countries.

The T-54B introduced a

new two-axis "Cyclone" gun stabiliser and the Luna infrared (IR) searchlight system. Both the T-54A and T-54B carried a 12.7mm heavy machine gun mounted by the loader's hatch to defend against enemy aircraft. Some of the license-built T-54Bs differed in detail from Russian manufacturers' machines, the Poles in particular adding details such as a rotating turret floor and better driver's controls.

The possibility of nuclear warfare in Europe led the Soviet army to test the survivability of their tanks. Test indicated that in a nuclear explosion, blast overpressure would kill the tank crew even inside the vehicle. ▶



# Think Tank - T-54/T-55 Main Battle Tank Family



This T-55AGM with the Drozd system was seen at an arms bazaar. Note how wide the Drozd launchers were, limiting the use of these tanks in tight spaces. The T-55AGM is one of the latest comprehensive upgrades for the T-55. TACOM photo.



As Russian losses mounted in Afghanistan, the Russian army decided it was better to release older, cheaper tanks to fight there, rather than the T-72s they had first used. Many of these were taken over by the Afghan army, like this abandoned T-54 which was overpainted for camouflage in the snow.



The Iraqi army used a good number of Chinese-built Type 69 tanks, improved copies of the T-54. This example has been upgraded with anti-rocket side armour, rubber side skirts and a circular extension under the rear plate for a cooling fan, brought over from the T-62.



This is a front view of the Iraqi Type 69 seen above, showing the lights mounted on the front mudguards and otherwise few changes from the basic T-55. Almost all of the Iraqi T-54, T-55 and Type 59/69 tanks were destroyed or scrapped following Desert Storm and the invasion of Iraq in 2003; fewer than a dozen survived for service in the new Iraqi army.

Kartsev's bureau was tasked to design a system to protect the crew. The new "Obiekt 155" featured a sealed environment for the T-54, protecting the crew from blast and radioactive dust and other contaminants or chemicals.

The PAZ environment system was successful, but the large turret ventilator had to be removed and other modifications were required. The new tank also featured new road wheels, often referred to as "starfish" wheels from the shapes of the wheel centres; they would be a prominent feature of all subsequent original T-55 series vehicles. The turret mounted heavy machine gun was deleted as it was not effective against fast jet aircraft. The "Obiekt 155" was adopted as the T-55 and entered production in 1958.

## THE T-55

Additional testing found that while the T-55 crews were protected against the physical effects of a blast, radiation could still incapacitate and kill the crews. So, a supplemental radiation protection installation called POV was added beginning in 1961. The "Obiekt 155A" was the prototype with the POV lining covering most of the interior of the tank. Some of the POV lining had to be placed on the outside of hatches and hatch bases and covered in thin sheet metal. This prototype became the T-55A and was the last original production version of the T-55 family. Production began in 1963.

The development of the T-62 with a 115mm gun from a lengthened T-55 in mid-1961 led to the reduction and eventual end of T-55A production in the Soviet

Union by 1971, with just one plant in Omsk building the T-55s until 1977, largely for export. Late in T-55 production, the 12.7mm turret machine gun was reinstated, now intended to fend off the newest enemy of armour: the attack helicopter.

In common with many other MBTs, especially those no longer in front-line service, the T-54/T-55 family has been converted into a bewildering array of special purpose vehicles, from self-propelled artillery and mortars to engineering vehicles, recovery vehicles, flamethrower tanks, armoured personnel carriers, bridge layers and many variations. The T-54/T-55 family has proven to be among the most versatile armoured vehicles in the world, capable of being converted into almost anything the users want it to be.

Over 90 countries and political entities have used T-54 and T-55 variants over the past half century. Over two dozen have produced or developed their own modified versions of the basic design, some with minor changes, while others have made such extensive alterations that the original identity is lost. While the T-54/T-55 were never fully equal to the western tanks they faced in combat, their simplicity and reliability made them ideal for use by third-world countries with inexperienced troops. They were also vastly less expensive than most western tanks available on the surplus market.

## EXPORT AND DEVELOPMENTS

Some of the major users of the T-54/T-55 have included the Soviet Union and the Warsaw Pact ▶



The T-55AM2, seen here in Sofia, Bulgaria, introduced a supplemental armour package made of composite structures covering the glacis and the forward part of the turret. The add-on turret armour was often referred to as "brow armour" and was also fitted to the T-62. The side skirts were also part of the package to protect the suspension from shaped charge weapons.



The T-55AM2B was used by the army of East Germany, and differed from the T-55AM2 above in being equipped to fire the "Bastion" gun-fired guided anti-tank missile. photo by Werner Wilmann.



Pakistan was a major user of T-55 and Type 59 tanks and developed their own modernisation package of upgrades. The "Al Zarras" tank mounts a 125mm smoothbore gun with stabilised fire controls and carries an extensive installation of explosive reactive armour (ERA). This is the earlier version which still used the original Type 59 turret. photo by raza00007



The later versions of the "Al Zarras" feature a completely new welded turret. All versions of this tank use the new live track and the newest examples have a thermal shield for the 125mm gun.



The Romanians used a license-built copy of the T-55 as the basis for the upgraded TR-85, introduced in 1990. It featured a completely new suspension with six road wheels, side skirts and a laser rangefinder for the 100mm main gun.



In the mid-1990s the Romanians decided to upgrade the TR-85 to full NATO standards, leading to the TR-85M1 seen here. The engine was replaced with a German diesel, and the tank has a modern stabilised fire control system even though it retains the 100mm main gun. It also carries extensive ERA and armour improvements.

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SCALE  
1:35



# Think Tank - T-54/T-55 Main Battle Tank Family



This side view of a Romanian TR-05M1 shows that virtually nothing is left of the original T-55. The hull, suspension and turret have all been extensively rebuilt. photo by DeloresRKT



A number of factories and overhaul centres in Ukraine have developed a myriad of upgrades and extensive rebuilts for the T-54/T-55 family. This is the T-55AGM upgrade package which takes the T-54/T-55 and Type 59/69 tanks to the level of the modern T-80 main battle tank. It has a two-stroke diesel engine, revamped suspension, new driving and fire control systems, new fire suppression for crew safety, ERA, and an array of sensors for gun-laying and self-protection. The main gun can defeat most tanks at ranges up to 2000-3000 meters, and 5000 meters with the gun-fired AT guided missile.



In the late 1980s, Iraq sought to improve a number of their T-55 and Type 59/69 tanks. This T-55 "Enigma" was an Iraq upgrade intended to be a command tank. It was a cheaper alternative to the command tanks in Ukrainian rebuilding programs. The major part of the upgrade consisted of rather bulky add-on blocks of composite materials encased in steel boxes. The glacis, forward hull sides and the front half of the turret were overlaid with the composite blocks, and spaced armour added for the turret rear. Protection was similar to the brew armour on the T-55M2, and in one battle during Desert Storm, one of these "Enigmas" withstood several hits by "Milan" AT missiles before being destroyed by a helicopter.

This T-55AGM side view shows the major changes made to the hull and the long turreted bustle provides safer ammunition storage similar to the M1 Abrams and the live track improves mobility and reliability. This package also has been fitted to the T-62.

► countries and successors, Peoples' Republic of China, India, Pakistan, Iran, Iraq, Israel, Afghanistan, Cuba, Egypt, Ethiopia, Hungary, North Korea, Lebanon, Libya, Mongolia, Romania, Sudan, Syria, Vietnam, Yemen, and Yugoslavia and successors. A huge number of smaller users have taken the T-54/T-55 into every continent except Australia and Antarctica. Many thousands are still in second-line service or storage, promising a service life far into the future.

Many of the nations that have used the T-54/T-55 still offer various upgrade packages and some of these do improve the tank's capabilities to those of far more modern MBTs. Some of these upgraded tanks are as capable as some of the newest MBTs, having been fitted with the latest power packs, guns, fire control and threat

detection systems. Some of the most extensive improvement offerings come from current users, especially Ukraine.

Many of these new upgrades are marketed to use the modification centres that once overhauled the vast numbers of Soviet-designed MBTs used in years past. Typical is the T-55AGM, an upgrade package for the T-54/T-55 that replaces most of the systems on the tanks with all-new equipment, much of it western. A new wrinkle is that many former Warsaw Pact members now wish to have operational compatibility with NATO forces, which has led to the inclusion of much western military equipment. There is a bewildering collection of modifications and upgrades available, suitable for any budget, and it is likely that the very high costs for new MBTs will keep

some countries looking at these less expensive alternatives.

Of course many nations cannot afford the more extensive offerings and must make do with what they can develop themselves. The Iraqis built an improved variant of their Type 59 Chinese-built tanks. It featured somewhat simpler and bulkier composite armour in steel box containers mounted on the forward hull and the forward portion of the turret. A spaced armour array was hung from the rear of the turret to cover the blind spot. This new tank was intended as a command vehicle and the armour was about as effective as the brew armour of the T-55AM series used by other countries. The Allied (coalition) forces in Operation Desert Storm referred to this strange looking tank as the "Enigma" and that has been

how it is known. One of these tanks withstood several hits from "Milan" anti-tank missiles until it was destroyed by a helicopter. A number were captured and are displayed in several coalition countries.

In further development, the lengthened T-55 created by Leonid Kartsev's UVZ design bureau became the T-55's replacement, the T-62, and that in turn was heavily reworked with a new suspension and new hull and turret and a 125mm gun to become the T-72, which in turn has been developed into the various permutations of the T-80 and T-90 MBTs with all the newest features available. In the newest Russian tanks is the core design from T-54/T-55, still making its mark. ■

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## BOVINGTON ENIGMA

Brett Green takes a walk around The Tank Museum's T-55 Enigma and finds some interesting details for modellers.

I spent a full day at the Tank Museum, Bovington, during my November 2010 visit. One of the most memorable vehicles that I saw on that day was the museum's captured Iraqi T-55 Enigma.

Bovington's Enigma is believed to have been attached to the Iraqi 14th Infantry Division. It was captured, abandoned on the highway from Kuwait City to Umm Qasr, during the Gulf War in 1991.

This example is almost intact, complete with graffiti sprayed by coalition troops while the vehicle stood derelict in the desert.

For more information on the Tank Museum, visit their website at [www.tankmuseum.org](http://www.tankmuseum.org)

The forward driver's side hull armour block is missing from the vehicle. Not the oxidized primer shade where the block has been removed.

▼ Much of the welding is very rough. Check out the large messy weld seam here.



▼ The forward armour blocks with the recessed tow hooks peeping out from cutouts.





▲ Light fitting and electrical cable details on the right side of the forward hull.



▲ The right track guard is missing, revealing the detail of the chunky T-55 track links.

▲ The full run of right side armour blocks is intact.



▲ The exhaust has been blanked off but is otherwise in pretty good condition.



▲ The staggered tops of the left side armour blocks may be seen here.



▲ Detail of the additional armour welded to the hull underneath the turret overhang.



▲ Road wheel detail.



▲ The front turret armour block is hinged. In the "up" position, we can see the multiple layers of metal inside the block.



# Reference - T-55 Enigma at The Tank Museum, Bovington



▲ Turret left side armour blocks.



▲ The fabric mantlet cover has seen better days.



▲ Note the actuator attached to the gun barrel. This elevates the infra-red light in unison with the main gun.



▲ The Infra-red light. The external housing is missing.



▲ The Iraqi-designed cupola mount for a DShK heavy machine gun.



▲ The same mount viewed from a different angle.



▲ The rear turret counterweight.



▲ The counterweight is mounted via stout weld beads.



▲ A view of the counterweights from the rear. Note the graffiti.



▲ A wider view of the left side turret armour.



▲ Mounting detail of the counterweight blocks.



▲ Hinge detail of the left hatch.

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**T**he T-34 was the backbone of the Soviet Union's armoured force from 1941 onward. Although the powerful IS-2 and IS-3 were also developed during the Great Patriotic War, a strong focus was kept on the mass production of the effective, but by no means perfect, T-34.

By 1943, Soviet tanks found themselves pitted against daunting

German super-Panzers and tank destroyers including Tigers and Panthers. It was clear that future enemies would also field such dangerous adversaries, so work began on a new Soviet tank design that was up to the challenge.

The prototype for the new T-54 tank was produced just before the end of the war in February 1945. This was an all-new design with a low silhouette and rounded turret,

with five large road wheels on each side, powered by a 12 cylinder diesel engine and armed with the 100 mm D-10T cannon.

The T-55 was initially developed as a response to the need for nuclear, biological, and chemical protection of the vehicle and its crew. The T-55 received the new V-55 12-cylinder 4-stroke one-chamber 38.88 litre water-cooled diesel engine, improved armour and

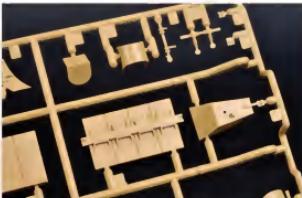
increased ammunition stowage.

The T-54 and T-55 were simple tanks that were relatively inexpensive to maintain and easy to crew. These attributes have made the T-54/55 very popular as an export type to Warsaw Pact, Middle Eastern and developing nations.

Over a period of six decades, the T-54/55 has been subject to many upgrades and modifications, and holds the distinction of being



The upper hull is a modified moulding with prominent mounts for the applique armour.



Ballast is supplied for the back of the hull.



The distinctive "wing" armour sections for the front of the hull.

# IRAQI SPEARHEAD

## PART ONE - CONSTRUCTION

The Editor wastes no time building Tamiya's new 1:35 scale Iraqi uparmoured T-55 Enigma.



The new Enigma kit is packed under typically attractive Tamiya box art.

the most produced tank in history. Production is estimated to be between 86,000 and 100,000.

Iraq took delivery of thousands of T-54s and T-55s from 1958 until 1985. These were used comprehensively in the Iran-Iraq wars, against Coalition forces in the 1991 Gulf War and again in 2002's Operation Iraqi Freedom. Around 1,500 T-54s, T-55s and TR-580s were in service with the

Iraqi Regular Army in 1990, with 500 remaining in 2002.

The T-55 "Enigma" was an Iraqi attempt to upgrade the armour of the ageing T-55 during the 1980s. The Iraqi designation of this unique type is unknown – the name "Enigma" was bestowed on the vehicle by Coalition forces during the 1991 Gulf War.

The Enigma appears to have been used as a Command vehicle

in regular T-55 units. The type saw combat against Coalition forces in 1991, although the additional armour appears to have done little to protect it from heavy losses.

### TAMIYA'S NEW 1:35 SCALE T-55 ENIGMA

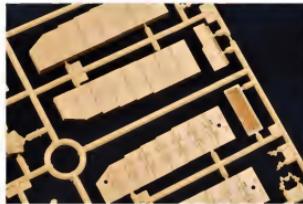
Tamiya's 1:35 scale T-55 kit was released in 2002 and became an instant classic thanks to its high level of detail, accuracy and ease of assembly. It is still clearly the

best T-55 kit available in 2012.

Tamiya has taken advantage of this excellent base kit to deliver an Iraqi T-55 Enigma.

Although the running gear, lower hull and some of the detail parts are from the original boxing, much of this kit is new or modified.

Now moulded in dark yellow, Tamiya's 1:35 scale T-55 Enigma comprises approximately 382 plastic parts, four large polythene



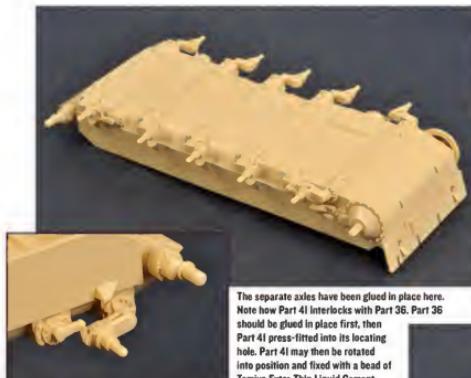
The side armour pieces are moulded as full lengths in inside and outside sections.



A nicely moulded crew figure is supplied. He could be used in the turret or standing beside his tank.



Tamiya has also modified the original T-55 turret to permit installation of the various unique armour and other fittings.



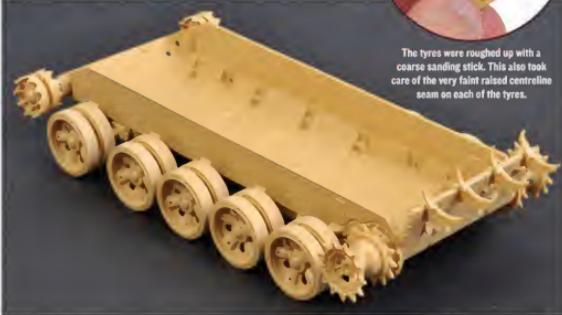
The separate sprots have been glued in place here. Note how Part 41 Interlocks with Part 36. Part 36 should be glued in place first, then Part 41 press-fitted into its locating hole. Part 41 may then be rotated into position and fixed with a bead of Tamiya Extra Thin Liquid Cement.



The road wheels, drive sprockets and idler wheels assembled and ready to be fitted to their axles.



The sole modification made to the entire vehicle was to cut off the locating tab from the external fuel drum holders using a sharp hobby knife. The unmodified part may be seen on the left, while the post-surgery part is to the right.



All the wheels are a simple and precise press fit thanks to the polyethylene caps and Tamiya's engineering.

► caps, ten small polyethylene caps, I small sheet of vinyl mesh and two full-length flexible vinyl tracks. Two of the sprues and the upper hull are brand new, while the turret has also been modified to accommodate the armour segments and other fittings.

All the parts, whether from 2002 or 2012, are moulded to the same outstanding level of quality.

The suspension features separate swing arms, so the wheels may be posed on uneven terrain if the modeller wishes.

The road wheels, idler wheels and

drive sprockets are held in place with polyethylene caps. I was a little surprised that Tamiya did not take the opportunity to offer a set of link and length tracks with this new kit, but there are plenty of options available for replacements - Fruimodel and Modelkasten being the best - if you don't like the flexible vinyl lengths.

Vinyl mesh is supplied for the grilles on the engine deck, and the large external fuel drums on the back of the vehicle are included in this kit too.

The gun barrel is broken down

into left and right halves with an end piece.

An Iraqi tanker figure is included, so you will be able to practice your moustache painting skills.

There are no decals in the kit.

to add Fruimodel tracks and an aftermarket gun barrel. In fact, I actually went out and bought them both. On reflection, however, I thought that it would be interesting to build this one genuinely straight from the box - no after-market, no metal tracks, no additional texturing or raised casting marks - just the way its makers intended.

That'll be unusual!

Construction is pretty well covered in the accompanying photos and captions, and Tamiya's instructions are very clear, so I will just make a note of some of my ►



Although the vinyl tracks looked a bit undone in the box, I decided to use them anyway. The eight shallow locating pins may be secured with regular plastic cement.



The tracks were looped and glued with Revell Contacta cement. Plastic clamps were used to hold the tracks in place while the cement dried.

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The fit to the sprockets is fine, but they look like big rubber bands right at the moment.

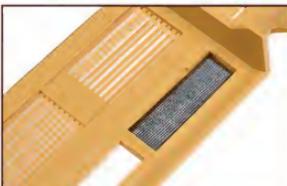
Revell Contacta cement was applied to the top of the front and rear roadwheels, and the tracks were held down while the glue dried.



Ah, new that's better! By the time the front of the upper track run is hidden by the applique armour, the kit's full-length vinyl tracks will actually look pretty good.



Similarly, the kit-supplied vinyl mesh looks good too, with its authentically woven finish. A template was made from Tamiya masking tape before the mesh itself was cut to size.



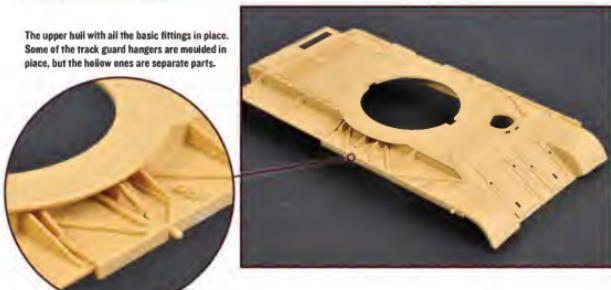
First the pre-cut mesh is glued on the inside of the engine deck using Tamiya Extra Thin Liquid Cement...



...then the bottom cover is secured.



The result is a convincing mesh and vent combination.



The upper hull with all the basic fittings in place. Some of the track guard hangers are moulded in place, but the hollow ones are separate parts.



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## ◀ key observations.

The sole modification to the kit was to cut off the raised locating tabs on the external rear fuel drum racks, as I was not planning to fit the drums themselves.

I confess that I was not particularly impressed with the vinyl tracks when I saw them in the box, but I was determined to finish this kit straight from the box so I gritted my teeth and used them.

These are identical to the tracks included in the 2002 release, and they may be fixed with standard plastic cement. I used Revell Contacta glue on the eight shallow locating pins, then clamped the joins with small plastic clamps until the were set.

After leaving the looped tracks overnight, I was pleased to find that the bond was very strong. The fit of the tracks over the sprockets was perfect, so now I just had to introduce drape into the equation.

I once again took advantage of the vinyl's glueable attributes and applied spots of Revell Contacta cement to the tops of the front and rear road wheels on each side, and to the corresponding positions on the underside of the tracks. I first pressed the tracks down, then put a heavy little box filled with paint bottles on the top track run. The box was pretty much the perfect size to maintain pressure on the entire length of track. This was balanced against a bottle of thinners while the cement dried.

The result was a pretty natural drape along the top track runs. To my eye the vinyl tracks appear a little underfed, but with the distraction of all the surrounding armour I think it looks good enough, especially considering the big saving in both time and money compared to Modellkasten or Frial individual links.

In Step 15, the single turret front armour block is hinged, but you will need to use microscopically small amounts of glue to make sure it stays workable. Also, if you wish to pose this block raised on the finished model, you will have to cut the counterbalancing springs (Parts E3) shorter before you do so.

## INTERMISSION

I started cutting parts from the sprue at around 8:00pm on a Saturday night, and managed to get to this stage of construction by 8:00pm Sunday.

The parts count of more than 380 belies the speed and ease of this build, partly because of the very large number of parts "not for use", and partly because the kit almost falls together thanks to Tamiya's brilliant engineering.

I am very happy with the way the model looks straight from the box, and I am looking forward to seeing how it looks painted too! ■



The upper and lower hulls were glued together and held in place with large plastic Irwin clamps until the bond was set.



The front armour blocks have now been fitted. The fine headlight brush guard is moulded in plastic, but the lens of the headlight itself is solid – presumably a hangover from the original 2002 kit.



The engine deck looks quite effective with its vinyl mesh vents.



The turret complete, sans additional armour. The three-piece plastic kit barrel was used. Note that the gun is not designed to elevate – the mantlet is fixed.



The separate components that make up the rear turret counterweight and stowage box.

**“The kit almost falls together thanks to Tamiya’s brilliant engineering....”**



The turret armour features mounting racks that will never be seen once the parts are fixed in place. The front driver's side armour section may be made to be workable – or at least poseable – if a great deal of care is taken during assembly.

The searchlight, IR light, armour and counterweight have now all been added to the turret.

#### Modelspec

Tamiya 1:35 Iraqi Tank T055 “Enigma” Kit No. 35324

#### Materials and Accessories:

Ofna hobby knife  
Revell Contacta Cement  
Tamiya Extra Thin Liquid Cement  
Tamiya Surface Primer

#### Paints and Finishing Products:

None yet!

Fantastic fit; high level of detail; even the vinyl tracks are good!

Nothing that I can think of.

#### Available from

Thanks to Tamiya for the sample [www.tamiya.com](http://www.tamiya.com)  
Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

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#### NEXT TIME

Next time, we will describe the painting and weathering of Brett's T-55 Enigma.

What a dream of a kit. It has taken less than two days to get to this stage.





The one-piece upper hull with mudflaps moulded in place.

# AFTER THE EASTERN BLOC

Zvezda has released a 1:35 scale state-of-the-art kit of the latest Russian Main Battle Tank, the T-90.

The T-90 Russian Main Battle Tank is a logical development of the long-serving T-72 family. The new vehicle was developed in 1989 by the Uralvagonzavod Design Bureau at Nizhni Tagil, and the title "T-90" was allocated in 1993.

The 125mm smooth bore 2A46M main gun can handle a variety of shells and also laser-guided missiles with an impressive rate of fire of 7-8 shots per minute. The T-90 is capable of engaging ground targets or low-flying aircraft and helicopters. In fact, it is claimed that the T-90's gun could destroy most modern tanks before it was in range of its adversary itself.

The tank is also fitted with the latest optics and electronic countermeasures including Shtrora-1.

The explosive reactive armour gives the T-90 a distinctive look, but its T-72 heritage is unmistakable from almost every angle.

Zvezda has been building a new reputation as a world-class model company in recent years. Their latest release, a 1:35 scale T-90, will bolster their standing even further.

Zvezda's 1:35 scale T-90 comprises around 442 parts in grey plastic, 20 clear parts, a length of braided nylon string and two sheets of nylon mesh.

The quality of moulding is excellent and sprue attachment points are quite fine.

The level of detail is fantastic.

The surface textures are authentic - raised or recessed as appropriate. I especially like the slot detail on the many large screw heads on the turret.

In common with many kits from Eastern Europe, the hull is provided as a "flat pack" with separate floor, sides, front and rear panels. Somewhat unusually, the turret is also broken down in this fashion, presumably to permit the moulding of deep and intricate detail on the roof.

The Commander's and Loader's hatches are both split into separate upper and lower halves, so we don't have to worry about the common ejector pin circles often found in these areas. Separate handles, latches and scopes make these very well detailed indeed.

The mantlet is moulded with a fabric cover (in plastic of course), and is designed to be glued in a fixed position. The 125mm barrel is a two-piece assembly split lengthwise across the middle.

The various lights all feature clear lenses - a welcome touch and by no means universal even amongst mainstream kit makers at 2012.

A plethora of detail - stowage boxes, ERA, smoke projectors, IR equipment, electronics and more - ensure that the turret is a very busy sub-assembly.

Two grades of nylon mesh are supplied for the engine deck. The weave is quite prominent and should look good when the mesh is in place.

Suspension arms are separate, and running gear detail is well up to the standard of the rest of the kit.

I was particularly impressed with the tracks. These are made up from multiple lengths - the shortest being three links that curve around the drive sprockets and idler wheels, with the longest covering the top and bottom runs. The guide teeth are separate and also cleverly moulded in corresponding lengths. Presumably, this makes it easier for Zvezda to mould the gaps in the guide teeth. A bonus associated with this breakdown is that it will be very easy to deal with the ejector pin marks on the inside of the tracks (only present on every fifth or sixth link) before the guide teeth are glued in place.

Big external fuel drums and separate lines are also provided.

Two schemes are offered - one in overall green and a three-coloured camouflage - but a full selection of white digit decals are supplied so you will be able to depict a wide selection of T-90s (as long as they have white numbers!)

Zvezda's 1:35 scale T-90 Main Battle Tank is truly a state-of-the-art boasting excellent detail and innovative engineering. I have heard suggestions that Zvezda might be offering a T-72 in the future too, I really hope that they do! ■

Zvezda is distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)



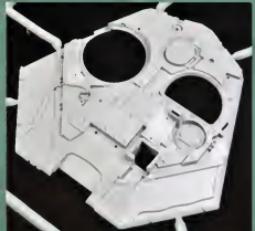
Curved plastic track sections will hug the drive sprockets and idler wheels.



Road wheel detail.



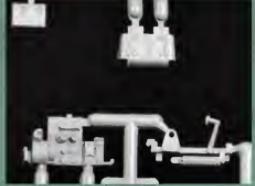
Nylon mesh and the clear sprue.



The beautifully detailed turret roof. Much of this will be covered with more layers of detail.



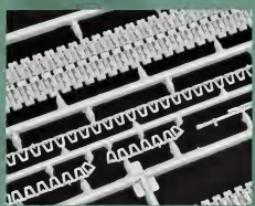
The hatches are noteworthy too. I like the slot detail on the screw heads.



Fine detail is very subtle.



The two-piece gun barrel, split down the middle.



The track sections feature separate lengths of open guide teeth.

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MODEL CONSTRUCTION: EMILIO BONACHERA LÓPEZ

FIGURE PAINTING: DIEGO JIMÉNEZ MOLINA

MODEL PAINTING, GROUNDWORK AND TEXT: JOAQUÍN GARCÍA GÁZQUEZ

# MID-SIZE MARDER

Tamiya's 1:48 scale Marder III Ausf. M features in a group build of a winter scene on the Eastern Front.

**T**he Sd.Kfz. 138 Marder III Ausf. M was the last and most numerous German standard tank-hunter based on the Panzer 38 (t) chassis to go into service.

The name Ausf. M is derived from the German word "Mittelmotor" - central engine.

It was armed with the PaK 40 75 mm. gun, which was placed toward the rear of the vehicle. It was also equipped with an MG34 or MG42 machine gun mounted at the top of the superstructure armour as an essential close defence weapon.

This variant was produced between 1943 and the beginning of 1944. 975 were produced in total and the official designation was Sd.Kfz.138, Panzerjäger 38(t) mit 7.5cm PaK40/3 Ausf. M.



**CONSTRUCTION** by Emilio Bonachera López

Tamiya's 1:48 scale Marder III Ausf. M is simply a fantastic kit. It fits precisely, is easy to build and requires very little cutting. Some people consider this is Tamiya's best 1:48 scale military vehicle to date - and with good reason!



The only real negative aspect of the kit is the excess of circular ejector pin marks, which have been covered with white putty and sanded until they are totally covered.



Small scratch built parts have been added to represent bolt heads, rivets, hinges and other tiny details.

Some handles have been removed and replaced with finer copper wire, bent to shape.



In a model such as this one, it is essential to prepare the sub-assemblies in order to more easily paint them and prior to final construction.



**PAINTING** by Joaquín García Gázquez

I have long wanted to paint a Marder III in a winter scheme, and now was my perfect opportunity. This scheme features a base of German three-colour camouflage but when winter arrives, the crew applies whitewash camouflage using paintbrushes in a shoddy way.

The work is tackled in four main stages:

- A Base camouflage.
- B Basic weathering effect.
- C Colour white application.
- D Final weathering, dirtied and finish.

**A. Base Camouflage**

As usual, we begin by airbrushing the base colour bearing in mind the natural highlights of the model, according to its structure and the available light. You can notice different grades of yellow; lighter in the horizontal planes, darker in the vertical ones and the darkest in the lower parts.



The inside of the fighting compartment is darker than the outside.



The running gear is sprayed using a soft and natural application.



The camouflage colour lines are applied with airbrush, heavily diluted and painted with patience. This stage is completed with fine shading by mixing diluted Tamiya XF-1 Flat Black and XF-10 Flat Brown, emphasising the lower parts and the inside of the fighting compartment.

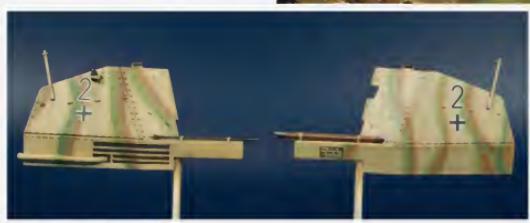
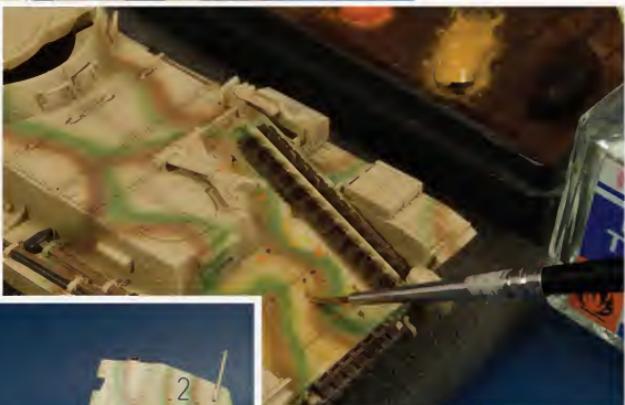


## B. Basic Weathering Effect



I applied the decals with Micro liquids and start painting details such as tools, chains, seats, etc. with Vallejo acrylics.

Next, I proceeded with the classic oil painting treatment. Notice that I have put the oil paint on a piece of cardboard that will absorb the excess of oil, to avoid undesirable brightness. The cardboard is fixed to a little box, to keep the paint fresh until the tank is painted.



Comparison between the sides before and after the oil painting.



Here is what it looks like finished.

## Inside the Fighting Compartment



The next step is to finish inside the fighting compartment. Before painting the outside, the inside must be painted first. I began by applying intense chipping to the area where the crew works the most. For that, I use the sponge technique with Red Brown and Black acrylics.



I go on with a paintbrush, reviewing the previous work and working other areas out. It should not be all the same chipping. The gun's breech is painted with Citadel metallic "Chain Mail".



I polish edges and carefully pick out more worn areas with a pencil.

It's time to finish the gun. The details are shaped and some stains are simulated with dark oil paints. I apply them in several coats, so

that the previous work is not totally obscured. This can also be done with very diluted acrylics, however I prefer to use oil paints.



Next I place the gun and glue the superstructure sides. The fit is perfect. To complete the interior, more dirt is added by settling pigments on the floor with a paintbrush.



These are fixed with earth colours oil paintings diluted in Humbrol's Thinner.

## C. White Camouflage



The temporary winter camouflage required white brushstrokes. To achieve this effect, I cut the tip off an old paintbrush and used it to paint the model.



I used Humbrol white enamel, because it allows us to correct any possible mistakes or wrong strokes. It can be easily erased with a drop of thinner, which would have been much more difficult using Vallejo acrylics.



A uniform pattern is not necessary. I suggest that you consult real pictures of similar camouflages.



In the same way, I work both the inside of the superstructure and the sides of the gun carriage. You will see that they look heavily used.



Once dried, it looks magnificent.



Some oil stains are added using Tiran's asphalt oil paints and... the interior is finished!



You will need some patience, but you will be ready to go!



Before the white paint is dry, I simulated wear and tear on some of the edges and heavy crew traffic areas next to the hatch.



Tamiya's acrylic XF-1 Flat Black diluted 90% in alcohol 96° was used to represent shadow and dark areas of the vehicle.

## D. Final weathering, dirtied and finish



Again, oil paint was used to age the finish and offer a tonal variety to the surfaces.



The doors, hatches and other joints were defined with natural shadow oil paint and diluted black acrylic.



On the lower parts, I began with the earth and mud. I mixed some pigments with a drop of powder plaster and water in a plastic container. The pigments used are obtained in an Art shop, where a variety of earth colours can be found. I buy different types, mix them and get a range of earth colours ready to be used and stuck with the help of a hard hair synthetic paintbrush. The grey plastic piece marked with an arrow is used as a support that helps to easily paint the model, holding it with strong nippers.



Next I fix the mixture with oil paint diluted in Humbrol's thinner.



To avoid accumulation of the pigments, we can use a toothpick, alternating both techniques to apply the mud to the lower hull and running gear.



We work on the chassis in exactly the same way. Notice that there are up to three different earth pigment tones. Work them out until you obtain the the desired blend of lumpy dirt and mud.



The high points of the tracks are polished with a pencil.



Once finished, I airbrushed the model with varnish to both simulate moisture and set the pigments.



A thin layer of dry mud, due to the tank's movement, is easily created with the airbrush and Tamiya's acrylics.



As usual, we finish up by blending the stain with oil paints.





I also shaded some details, using only natural shadow to keep the effect soft.



A dark wash will help to define the suspension's details. More earth tones can be also added by dirtying with diluted oil paints.



Alternating between moist and dry mud, we introduce some variety and realism into the work.

To finish the Marder, we assemble the pre-painted and weathered chassis. Now it is ready to be placed on the base. Once it is positively located, it will be necessary to touch it up for a perfect blending with the groundwork.

Notice that every part of the model shows a different level of dirtiness depending on the location - mudguards, horizontal surfaces, superstructure walls, chassis, etc.

The fighting compartment door is intensely weathered to show that the heavy traffic of the crew.

The soft dust is most obvious near the bottom of the vehicle, and decreases in intensity further up the side of the superstructure.

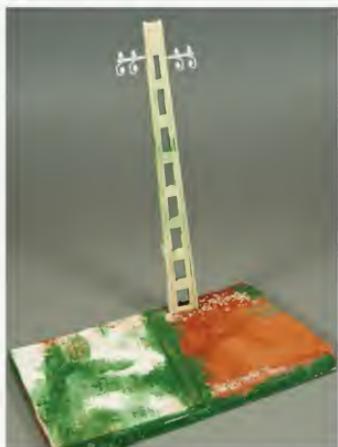


## The Figures



The figures are from Total War Miniatures, painted by Diego Jiménez Molina with acrylics, following the usual highlight and shadow techniques.

## The Groundwork



The ground was very easy to do. The groundwork was modelled with a plaster sheet of paving and Dash Pronto putty, model railway earth and a Cast 48 telegraph pole.



Once dried, we begin airbrushing with Tamiya and Lifecolor's paints.



The paving is worked out with a dry paintbrush and Humbrol's dark grey enamels. Later, the surface will be worked with oil paintings to offer the base more tonal variety.



Small details such as little pebbles, paving damage, etc are painted with Vallejo acrylics.



The vegetation is obtained by both commercial companies such as Silflor; and natural elements, such as sea weed. To integrate these elements within the ground, we airbrush them first.



The mud and loose earth are simulated by setting pigments in different areas, avoiding uniformity and bearing in mind the real tank's effect on the ground.

To finish, the pigments are fixed with diluted in Humbrol's Thinner oil paintings.

The final touch airbrushing Micre's Gloss Varnish to simulate dampness in the accumulation of mud.



## Integrating the Model and the Base



The varnish is also applied to the Marder's lower hull and running gear, to fully integrate it with the groundwork.



Due to its light weight, the model is secured with a drop of white glue and each of the figures with a metal bolt that will help them achieve a correct setting. The pigments used are the same for the lower part of the vehicle, the ground and the figures.

### Modelspec

Tamiya 1:48 scale German Tank Destroyer  
Marder III Ausf. M, Item No. 32568

### Accessories Used:

Total War Miniatures figures, Cast 48 Telegraph Pole

### Paints and Finishing Products:

Tamiya Acrylics, Vallejo Acrylics, Humbrol Enamels  
Humbrol Enamel Thinners, Microscale Gloss Varnish  
Dabu Pronto putty

Well detailed, excellent fit; interesting subject; perhaps Tamiya's best 1:48 scale military vehicle to date.

Some excessive ejector pin marks.

### Available from

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyca.net](http://www.hobbyca.net)

Rating

The telegraph pole is a simple but important feature that adds context to the scene.





Things are hotting up in the modern armoured vehicle market with a second M-ATV in 1:35 scale. Ross Ferro examines Panda's new MRAP.

# PANDA M-ATV

**P**anda Hobby's 1:35 M-ATV MRAP comprises 300 tan coloured plastic parts on 12 sprues, 26 clear parts on two sprues 3 very comprehensive sheets of photo etch, five vinyl tyres and a small sheet of decals.

Details on all the major components looks pretty good with just a slight hint of flash on some of the plastic parts on the duplicated "B" sprue with some more noticeably around the area of the two part coil spring pieces and shock absorbers. This can be reasonably easy to solve with a careful application of the trusty hobby blade to set things right. The two part chassis frames and associated fittings will require careful reading of the instructions and test fitting of all components during this critical stage of assembly to ensure every thing lines up and that the finished chassis sits on all four wheels.

The wheels hub detail is very nicely done with a very convincing rendition of the vehicle manufacturers name moulded into the outer wheel hub face and the bolt detail of each wheel is as good as any I have seen. The vinyl tyres may not be to everyone's liking. However in this case Panda have done an excellent job of avoiding the typical seem lines that can plague this type of medium with a very convincing tread pattern and side wall ribbing finish.

The assembly of the crew cab



Two sprues of clear parts are provided.

is where that sheet of photo etch begins to get a good work out in conjunction with the many plastic parts used to fit out this area of the kit. It has been pointed out by fellow modeller that the lower seat pan pins on part "H 5" may have suffered from a short shot during the injection process and sure enough on this set they were missing. This could just be an initial release issue and in any case can be fixed with a bit of thin plastic rod.

The one piece moulded plastic crew cab assembly has some very finely moulded surface details and the only two ejector pins marks I could find pretty much out of the way and out of sight. The multi piece door construction also looks very good and the clear parts are added at this stage and are distortion free and as far as I can tell in scale thickness.

The lower hull armoured plate and engine hood and forward facing IED jamming device are constructed and added to the already finished chassis during steps 20 through 22. The engine hood is moulded as a one piece unit and has some very finely moulded detail. When attaching the hood it will become apparent through the photo etch grill that there is no engine as aftermarket folks "lets get cracking" on fixing this!

The gunner's protected platform side and front armour parts are crisply moulded and appear to be very thin and in scale

for parts made in this medium. The thicker armoured glass clear parts also look the business and set of the entire gunner's platform very nicely. The multipart M2 is the only kit supplied weapon and appear to be of satisfactory detail.

Interestingly, the decal placement is called out during some of the assembly stages which may seem a bit odd considering you probably haven't painted those bits just yet. The only guide on the back page is for the instrument panel and some other part which I have yet to name. Painting is equally obscure with the guide in black and white and no real mention that I could find of suggested schemes or reference to any particular units. This would be a great time to check your references or the good old trusty web.

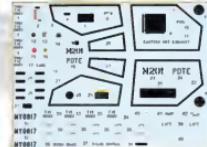
In conclusion, Panda has certainly put a lot of parts into this kit and also seem quite fond of photo-etch. There are some very tiny parts to be removed and added in the assembly of this kit so time and patience will be of the essence as this will be no weekend special. It will be interesting to see what Panda have learnt from this first release and in turn how they will follow this up. I personally am looking forward to seeing what come next.

Recommended.

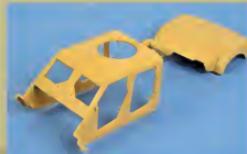
Thanks to Panda Hobby for the review kit  
[www.panda-hobby.com](http://www.panda-hobby.com)



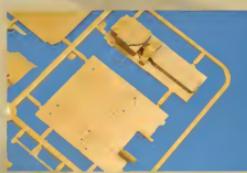
Panda just loves photo-etch!



Kit decals.



The one-piece cab and bonnet mouldings.



Cab floor and lower engine detail.



Moulding quality is very good.



The multi-part door assemblies.



Fine detail is good too, although some flash is present.



The vinyl wheels are very well detailed and do not have a raised centreline seam.

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**Matt Wellhouser**  
takes on Young  
Miniatures' big 1:10  
"82nd Airborne Bust  
Normandy 1944 -  
Geronimo".



# GERONIMO!

**T**he 82nd Airborne (All Americans) was one of the most famous parachute divisions during WWII. Along with the 101st, they were tasked with dropping into Normandy in the early hours of D Day. This figure represents an Airborne Trooper pre-drop, or as he would appear loaded in the C47 leaving England.

This bust has a main chute, reserve chute, life vest, and a portion of his Thompson sub machine gun. The kit has 14 parts, all resin. They are all expertly cast, with minimal casting blocks.

I like to assemble as much of the figure as possible before painting. For this project, I glued the main parachute, the small strap for the life vest and the "D" rings on the chute harness. I planned to mount the bust to a wooden base with a small piece of brass tube. I drilled a hole in the base and a

corresponding hole in the bottom of the bust. I do this before priming so I can handle the model without damaging the paint. When I reach the final assembly step, the bust just slips into place. All the other larger parts were mounted on small sections of brass rod on scraps of wood.

The bust was primed with Tamiya's aerosol grey primer. I have tried several other primers and I keep coming back to this one. It applies easily and never hides details.

#### FACING UP

All paints are acrylic Vallejo Model Color unless otherwise noted.

I began applying colour on the face. I tend to start with the eyes. I use a base of Vallejo Light Flesh and Basic Skintone. This produces an off-white colour perfect for eyeballs. Then the edges of the eye are outlined with a mix of Old Rose

and Burnt Cadmium Red. This is a very thin mix. This also gives colour to the very inside corners of the eye where the tear ducts are. Next I paint the iris. To make it easy, place the iris off centre - have your subject looking left or right. This way it is easier to place the iris without having one eye looking one way and the other looking another, or ending up cross-eyed. I painted the eyes looking right. For colour, I started with a slightly darker grey-blue mixed from Vallejo Medium Grey and Luftwaffe Blue. I started with a small dot and worked up to the final size. Sometimes I have to adjust the size with a toothpick or going back with the base colour. In this scale, the eyeballs are quite prevalent, so you have to do a bit more work. I like to add a small amount of a lighter shade to the iris. This is a spot slightly smaller than first. Sometimes I add a second lighter shade to this. Finally

the pupil is added using black. Make sure your pupils and iris's are the same size. I finish out the eyes by painting the flesh colour around the lids and coating the eyes with Future floor wax.

The face is painted with about five colours:

- Brown Sand (base),
- Burnt Cadmium Red (shadows),
- Basic Skintone (highlights),
- Black, and Burnt Umber.

Here are the mixes:

- Base - Brown Sand
- Shadow - Brown Sand + Burnt Cadmium Red
- Deep Shadows - Shadow mix + Black + Burnt Umber
- Highlight - Base+Basic Skintone
- High Highlight - Highlight plus more Basic Skintone

Medium values are mixed with lesser amounts of each shadow and highlight colours. ▶



I usually start with the face. The entire bust was prepared with Tamiya aerosol Grey Primer straight from the can. The eyes have been painted using a base of Vallejo Light Flesh and Basic Skintone. This produces an off-white colour perfect for eyeballs. Then the edges of the eye are outlined with a mix of Old Rose and Burnt Cadmium Red.



Next I paint the iris. To make it easy, place the iris off centre - have your subject looking left or right.



The face itself is painted with about five colours.



The shadows are applied in the deepest shadow areas - under the chin, nose, deepest parts of the eye sockets. I also like to place a fairly dark tone along the edge of helmet straps.

Medium highlights are placed in areas such as the forehead, folds around the mouth, chin and lower eyelids. High highlights go on top of the nose and cheekbones.

## ► SHADOWS

If you are just starting out with painting figures, I suggest you study other modellers' work and look at the shadow placement and degree of colour value for each area.

The shadows are applied in the deepest shadow areas - under the chin, nose, deepest parts of the eye sockets. I also like to place a

fairly dark tone along the edge of helmet straps. Medium shadows are placed in the hollows of the cheeks, folds of the nostrils, along the edge of the nose, the temples and furrows of the forehead. Medium highlights are placed in areas such as the forehead, folds around the mouth, chin and lower eyelids. High highlights go on top

of the nose and cheekbones. Imagine the bust being shown with light from above. That will guide you in placement of the highlights and shadows.

Moving on to the main portion of the bust, I began with the basic jump jacket. This is a tan/light khaki colour. I mixed up some German Camouflage Beige

and Khaki (Vallejo) and airbrushed that onto the bust. I mixed Black and Burnt Umber into that base colour for a shadow. The shadow was applied in the folds and between the arms. A mix of the base and Iraqi Sand was used as a highlight, applied to the top of the folds and shoulders. Once dry, I went to work with a brush and refined the colours with the highlight and shadow mixes. The life vest was painted with a mix of Yellow, Light Yellow, Orange Brown and Leather Brown. The highlights were painted with more Light Yellow added to the mix. You have to be careful with this so the highlights are not too light: it will look like chalk. Trust me I know.



**Moving on to the main portion of the bust, I began with the basic jump jacket. This is a tan/light khaki colour.**

HELMET

The helmet was base coated with Tamiya Olive Drab, and highlighted with Desert Yellow. The netting was painted with a mix of Khaki and Green Brown. The helmet scrims started out as an experiment. I really did not like the first aid pouch perched up there. In all my reference photos, the pouch attached up there is very rarely seen. I decided to leave it off. I like the helmet scrims that a majority of Airborne troopers put on their helmets. Scrims was a heavy weave burlap type of material that was in various colours. Troopers added it to their helmets as a form of camouflage. I thought of sculpting scrims, but the pattern of the burlap is hard to depict. I have a roll of Korean War vintage gauze bandage, and it has a really tight weave. So having a brave moment, I cut small pieces off the roll and soaked them in a mix of white glue and the appropriate colour Vallejo paint. I used three colours - Red Leather, Gold Brown and Russian Green. While wet, the pieces were applied to the helmet. After the glue dried the fuzz on the scrims was "painted" with hair spray to kill the fuzz. Then I applied some washes of Black and Burnt Umber. Finally lighter shades of the base colour was used to highlight the scrims.

Edges of the helmet were painted with Citadel Boltgun Metal. The "NCO" identification stripe was painted with White mixed with Khaki to tone it down a bit. Fitting the helmet to the finished head was straight forward- attaching the chin strap took a little persuasion with a hair dryer.



The helmet was base coated with Tamiya Olive Drab, and highlighted with Desert Yellow.

The netting was painted with a mix of Khaki and Green Brown. The helmet scrim started out as an experiment.

Scrim was a heavy weave burlap type of material that was in various colours. Troopers added it to their helmets as a form of camouflage.



The scrim was cut from a roll of Korean War vintage gauze bandage, and it has a really tight weave.

The scrim was painted in three colours - Red Leather, Gold Brown and Russian Green. While wet, the pieces were applied to the helmet. After the glue dried the fuzz on the scrim was "painted" with hair spray to kill the fuzz.



The head and helmet are now complete and ready for assembly.



The parachutes and straps were painted a mix of Brown Violet, Olive Grey and Olive Drab. Added to this was SS Camo Black Brown for shading and Sunny Skintone for highlights.



The back of the bust's uniform.

#### FITTINGS, THOMPSON GUN AND DETAILS

The parachutes and straps were painted a mix of Brown Violet, Olive Grey and Olive Drab. Added to this was SS Camo Black Brown for shading and Sunny Skintone for highlights. The thread running through the middle was painted a mix of Dark Prussian Blue and Black. The parachute line wrapped around the main chute was painted a mix of White and English Uniform. Highlights were accomplished by adding more white into the mix. Dark shadows for the line was made by adding more English Uniform and Black. Reinforcement sections of the harness are painted with English Uniform. All the hardware was painted with Boltgun Metal and black.

The reserve chute was painted very much the same, with a little more Sunny Skintone added for highlight. I added some stenciling to the top of the pack with Black. When I add stenciling, I keep the

paint mix real thin. It's easier to add than take away.

The butt end of the trooper's Thompson was primed and painted on a buff colour. For this technique and light buff or even white will work. Once dry, I use Burnt Umber tube oil paint, along with Burnt Sienna. I apply this with a old brush and wipe most of it off, then I gently drag the bristles along the butt stock. This creates a brush mark that simulates wood grain. The great part of this is you can go back and add more colour, or smooth out the marks to simulate different wood grain. Once this dried, I painted the butt plate with Citadel Boltgun Metal mix.

The 82nd Airborne insignia on the left shoulder was painted with red, white and blue. The red was shaded with a mix of Burnt Cadmium Red and Flat Red. The highlight was Old Rose and Basic Skintone. The blue was shaded with Black and Prussian Blue,

highlights were Andrea Blue added to Prussian Blue.

The flag (which was only worn by the B2nd on D Day) is a decal that I took from a Microscale sheet (US 48 star flags HO scale). Since the stars and stripes are pretty small in this scale, I cheated. I also saved money on the new eye-glasses I knew I would need if I painted the flag! I kept the colours of the flag pretty clean, due to the fact that the flag was freshly applied to the uniform.

Final assembly consisted of adding the chute straps on the shoulders, gluing the head and helmet, then mounting the bust on the brass tube affixed to the base. Last to be attached was the reserve chute and the butt stock of the Thompson.

#### CONCLUSION

This is a great figure for American WWII fans. Of course if you like painting large scale busts, this

a great one for the painter. Although there are not too many variations on colours, this bust is a great one to hone your painting skills. The kit is very well detailed and cast. It's a winner! ■

#### Modelspec

Young Miniatures 1:10 scale 82nd Airborne Bust Normandy 1944 - Geromino Kit No. YM1024

#### Paints Used:

Tamiya Grey Acrylic Primer  
Tamiya acrylic XF-59 Desert Yellow; XF-62 Olive Drab  
All other paints are Vallejo Model Color

Fantastic sculpting; virtually no mould seams or flash; high quality moulding; great for American WWII fans.

Not much colour variation.

#### Available from

Young Miniatures products may be seen on their website [www.young-miniatures.com](http://www.young-miniatures.com)

#### Rating



The flag is a decal that I took from a Microscale sheet (US 48 star flags HO scale). All the hardware was painted with a mix of Boltgun Metal and black. The butt end of the trooper's Thompson was primed and painted a buff colour. Once dry, I use Burnt Umber tube oil paint, along with Burnt Sienna. I apply this with an old brush and wipe most of it off, then I gently drag the bristles along the butt stock. This creates a brush mark that simulates wood grain.





# TASTY PASTY

Dragon has come to the rescue of modellers who don't like to make their own zimmerit anti-magnetic paste texture for their models with their new 1:35 scale Jagdpanzer IV L/70. Andy King takes a look.

**T**he Jagdpanzer IV was a tank destroyer based on the Panzer IV chassis and initially armed with a 7.5cm Pak 39/L48 gun. Later models built from August 1944 (the subject of this kit) had the more powerful 7.5cm Pak 42 L/70 fitted.

The vehicle was powered by a 12 cylinder Maybach HL120 TRM engine, weighed in at just over 25 tonnes and had a crew of four. Frontal armour was increased to 80mm for the later version but with the extra weight of the gun the Jagdpanzer was nose heavy

and difficult to operate over rough terrain, a feature that earned it the nickname 'Guderian-Ente' (Guderian's duck).

The earlier Jagdpanzers first saw combat in Italy during March 1944 with the Herman Goering Division. The 4th and 5th Panzer Divisions took it to Russia and the Panzer Lehr, 9th Panzer Division and 12th SS Panzer Division used it in Normandy. The later L/70 built from August that year, first saw combat during the Ardennes Offensive, more popularly known as the Battle of the Bulge.

This latest incarnation of the Jagdpanzer IV by Dragon features over 50 parts including track links however, as is usual, some sprues come from the earlier Jagdpanzer release (6397) and Panzer IV which means a fair amount of those 600 or so bits are going into the spares box. Also included is a small decal sheet, a frame of etch, a clear styrene sprue for the periscopes and two bags of coloured coded track links (for left and right).

The kit features Dragon's 'patent registered' zimmerit for those wanting a Jagdpanzer with the stuff on but are too afraid of mucking up an expensive kit to achieve it and to be fair they have made a good job of it. The zimmerit is very well rendered and it's obvious they have put some thought into it as the area around the front MG port for example is left blank (the port opened to the right). In fact, the detail is so fine you would have to be careful not to obliterate it with paint. I was surprised to see no zimmerit on the lower front hull plate but after checking my references, I can confirm that this is in fact correct.

The lower hull is newly tooled and, as well as being zimmerited, it features four axles each side for the return rollers. The wheels are beautifully detailed with manufacturer logo and serial numbers moulded on, the tracks are individual links which are also nicely detailed but do have two mould pin marks on the inside face that will have to be removed (trust me you WILL see them after you've painted them). Fortunately they are raised so a couple of evenings work whittling with a sharp blade should do the trick.

The rear hull plate is newly

tooled and zimmered and you have the choice of two towing brackets, one of which was fitted after December 1944 but as three of the four painting options are for vehicles from 1945 it's not hard to work out which one to put on.

The 'shurzen' or spaced armour for the vehicle sides is commendably thin and although moulded in one length it would be easy enough to separate should you wish to have missing panels, something that is a feature of German WWII armour.

The upper hull again has some lovely detail but to be really nit picky there is no cast texture to the top of the gun mantlet (part L4), something that can be compared to the spare one in the kit (part G3). No metal barrel is supplied, just a slide moulded styrene one but with a scrape of a modelling knife either side to remove the mould seam it should look okay, especially with the grooves for the rifling moulded inside the muzzle.

Inside the hull you have a well-detailed gun breech assembly and a radio rack that sits on the firewall and that's about it; but even with all the hatches open you wouldn't see much anyway. While speaking of hatches, you have a choice of hinges which I initially thought were specific to a particular date of manufacturing (Wow, they think of EVERYTHING do Dragon), however reading the instructions it became obvious the choice is for either open or closed hatches... erm... you wouldn't see the hinge with the hatch shut so why bother? Oh well it must mean something to someone...

Anyway, outside again and the on-hull equipment fitted to the engine deck have tool clamps



The zimmerit is the star of the show here.



The zimmerit is really well done, looking very authentic and trowelled on.



The rear hull plate with zimmerit.



Transmission cover with separate hatches.



The Saukopf mantlet features finely rendered zimmerit too.



The large main hull moulding. The moulded-on zimmerit will save you a stack of time!



The L/70 gun barrel features rifling at the end.



Well detailed drive sprocket.



Idler wheel.



The fabulous road wheels feature weld marks and raised manufacturer's logos.



Schurzen is admirably thin and moulded in one piece on both sides.



Casting numbers may be sliced off the sprues.



No zimmerit here, but that is correct.

moulded on which look a little chunky but these can be thinned down or replaced with after-market etch items if you feel the need. Also you can opt for two types of spare aerial stowage at the rear of the roof (Part B46 or G38), the former can be mounted two ways as well.

The instructions appear to be rational, something that Dragon seem to be finally getting a grip of lately, and don't look to have any pitfalls for the unwary although as always read them through before starting the kit.

Four marking options are offered but rather unhelpfully some of the colours are missing from the guide so I'll fill in the blanks:

- Pz. Jg. Abt.(Panzer) Jaeger Abteilung) "Heeresgruppe Mitte", Warsaw 1944 in a red-brown over dark yellow scheme;
- 9. Panzer Division "Hohenstaufen", Hungary 1945 in a three tone scheme of green and red-brown over dark yellow;
- Pz. Jg. Abt., Pz. Div. "Feldernhalle", Budapest 1945 in winter whitewash over green

and dark yellow and finally an overall dark yellow vehicle from an unidentified unit.

The colours are from the Mr Hobby and Model Master ranges.

The Jagdpanzer IV has long been one of my favourite tanks due to its mean, sleek look and low silhouette. I am really pleased that Dragon has done it justice.

After a shaky start with moulded on zimmerit a couple of years ago I have to say that Dragon seem to have finally nailed it and should look good after weathering.

The vehicle itself looks to be accurate but that's hardly surprising when you see Tom Cocker, Notger Schlechtendal and Gary Edmundson are technical consultants for the model.

If you want a Jagdpanzer IV but can't face doing your own zimm then this is the kit for you. Highly recommended! ■

Thank to The Hobby Company Limited for the sample  
[www.hobbyco.net](http://www.hobbyco.net)



Late style steel return rollers.



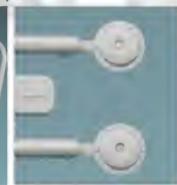
Decals and photo-etch.



You'll want to deal with these two ejector pin marks



The superstructure roof features separate hatches and other add-on detail.



Hub caps for the kit's road wheels. The middle bolt is slightly off-centre

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# THE GREEN BOBIK

Federico Collada builds, paints and weathers MiniArt's 1:35 scale Soviet armoured car, the BA-64B "Bobik".



**T**he BA-64 scout car commenced manufacture in the middle of 1941 thanks to the chief of the design team of the GAZ plant, V.A. Grachev, who won the Stalin Award Third Class. The initial model was based in the GAZ-64 Jeep to which they added an armoured superstructure, highly sloped and similar to the German Sd.kfz. 221 and 222 scout vehicles.

The first models had an open superstructure with a simple mounting for the machine gun. Although it was easy to maneuver and very well protected, it had a nasty tendency to overturn on uneven ground.

The B model started to be manufactured on the GAZ-64B chassis, which had longer distance between the axles which improved stability. This design also covered the armoured superstructure with a turret.

The BA-64 had a crew of two and it was armed with a DT 7.62 mm. machine gun with 1.260 rounds that resulted in a very light weapon. The four-cylinder GAZ MM motor provided a top speed of 80 km/h and 300-600 km range.

Although the BA-64 ended production in 1946, it was still active in some armies until the end of the century and it was used in the North Korean army in the Korea War.

#### THE MODEL

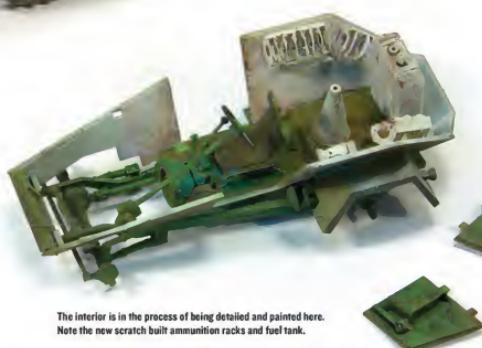
This model was originally released by Vision Models but re-boxed not long after the Ukrainian model company MiniArt. MiniArt offers the kit in Russian and German versions, changing some pieces and the decal sheets. The box contains the parts for the vehicle and a set of MiniArt figures comprising three armoured vehicle crew and two officers. The instructions manual also provide us a full colour pair of maps printed on the first page, which is a nice gesture for this reconnaissance vehicle.

I chose one of the manufacturer's decal options for my project - a vehicle of the First Mechanised Guards Corps of the Third Ukrainian Front in Vienna in 1945, precisely the one that appears on the front of the box.

The model is very easy to build as the parts have no mould seams or imperfections and they fit perfectly.

#### THE INSIDE STORY

The interior of the vehicle contains various details but some are missing. We can solve this by making them ourselves or searching in the "spares box". The most important items are the machine gun ammunition storage shelves, the fuel tank and the pockets in the doors. For the



The interior is in the process of being detailed and painted here. Note the new scratch built ammunition racks and fuel tank.



shelves and the pockets I used leftovers from photo-etched frets from others models. I made the tank with an appropriately sized and shaped piece of plastic to which I added some photo-etched straps. Of course, there is no need to add to the interior details if you are not going to leave the doors open. In my case I did not decide this until the very end so I went through the detailing process just in case. Finally I liked the vehicle with the doors closed but I enjoyed the detailing part a lot anyway.

To paint the interior of the model I first applied the green of the floor and the driver's seat before installing it. After masking the floor I painted the walls in white. I used the rusty tones from Lifecolor's acrylic range for the peeling paint applied with a little piece of sponge following the manufacturer instructions of accumulating small colour stains, lighter and less quantity every time. This way you can simulate the variety of tones that you can see in long-time rusted parts. It is better if you apply every new coat a bit diluted so the stains can act as a filter over the former layers.

I gave the whole model a wash with chocolate and black colour oils to highlight the details. For those who have not tried this technique yet, I warn you that you must first wet the surface with turpentine before applying the wash. To dirty the floor I decided to use Mig Pigments, applied mixed with water. Once it dried, I rubbed a bit with a hard brush. To finish, I rubbed some edges and details with a soft black-lead pencil to simulate the polished metal.

I also painted the chassis together with the gearbox and the steering wheel in the same Russian green colour than I used in the floor applying some lights through filters with the airbrush insisting in the center of the big surfaces to create a sense of volume.

After placing some back-packs from a Tamiya Russian soldier's kit and some maps in the pockets of one of the doors, I closed the vehicle, first gluing the bottom of the vehicle to the chassis, then the driver's seat and the interior mounting body of the turret and finally the upper part of the body.

With the vehicle already closed I proceeded to cover the gap of the turret so I could paint the outside of the model.

#### EXTERIOR TONES

This process was similar to the inside of the vehicle, adding the decals after the filters and painting some stains with different tones of green oils on the entire surface of the vehicle to simulate a very dirty paint. To paint these stains I used a similar technique to the washes, but with the difference of applying small spots of oil paints

over the wet surface instead of a general wash. With all the different coloured stains on the surface I blended them with turpentine to soften the demarcation like you do on a canvas.

To paint the metal of the tools, I applied a base coat of matt black paint and then dirtied it with different rusty tones filters, from darker to lighter leaving the previous one just to settle and finally rubbing it with black-lead pencil.

I used a commercial chrome spray that gives a very realistic look for the interior of the fender lights, better than the metallic modeling paints.

The last step was to splash the bottom of the car with a mix of dark shadowy pigment and water with a toothbrush to create little spots of dried mud. Repeating this process with different colour pigments you can achieve a very real "all terrain" effect.

I remember a long time ago I made this vehicle from scratch. The result was very different.

I am very happy with this new Bobik. It is better, cheaper and easier to build, it took me just two weekends to finish it.

I would not mind making another one in Korea with some white stars... ■

#### Modelspec

MinArt 1:35 scale BA-64B Bobik      Kit No. 35097

#### Paints and Finishing Products:

Tamiya Acrylic Paints

Lifecolor Acrylic Paints

Mig Pigments

Black lead pencil

Mineral Turpentine

- Good detail; interior parts included; easy build; good fit.
- Some interior details missing.

#### Available from

MinArt kits are available online from Creative Models Limited [www.creativemodels.co.uk](http://www.creativemodels.co.uk)

#### Rating



Kit decals were used.



I am very happy with this new 1:35 scale MiniArt Bobik.

I used the rusty tones from Lifecolor's acrylic range for the peeling paint.



To paint the metal of the tools I applied a base coat of matt black paint and then dirtied it with different rusty tones filters, from darker to lighter leaving the previous one just to settle and finally rubbing it with black-lead pencil.



Small spots of oil paints over the wet surface to create the muddy splatters on the lower surfaces.



# DIGITAL BUCKET

Wayne Bowman kitbashes the venerable ESCI Hammer Head with Trumpeter's newer M113 ACAV to deliver a much improved M901 in 1:72 scale.

love modelling unusual variants of common subjects, whether they be aircraft or armour, so a run of the mill box of a M13 wouldn't typically turn my crank. By chance one day while cruising around the web though, I came across a photo of a Jordanian M901 variant in the coolest digital scheme, and I thought, "I've got to do that one". This subject also meshed quite well with the fact that after some not so subtle prodding by one of my fellow modellers in the Greater Toronto Area (yes that's you Will), I had decided to try something with an interior.

Turning to my closet stash, I dug out my old ESCI M901, and my newer Trumpeter M113 ACAV, and pondered the logistics of bashing the best of each of these two kits together to create something that would do justice to the scheme and meet Will's criteria.

So off I went with these two kits in hand, as well as some Eduard photoetch to boot. Also added to the fray was Dragon's M1045 HMMV kit which provided a wealth of nicely moulded TOW missile components including the portable ground mounted launcher, canistered rounds, sights, and control boxes.

The Trumpeter kit offers the best choice for the basis of the vehicle, especially with respect to the running gear, which the ESCI kit falls short on with its single rather than dual road wheels. Not to put too fine a point on it, the ESCI kit is also "toothless", the link and length tracks sadly missing the guide teeth of the real items.

#### A HULL OF A GOOD TIME

Work began with the hull to make it ready for the interior work. The attachment provisions for the track skirts, a sort of key/keyway affair, would be rather unsightly, primarily on the interior, but

also at the top side of the skirt assembly on the exterior as well. Trumpeter's locating provisions were thus removed and filled along with a number of ejector pin marks in the same area. The filling was accomplished using one of my favourite fillers, that being crazy glue mixed with baby powder to a consistency of toothpaste. It cures quickly, sands well, and makes your model smell nice. The skirts would be assembled later, using the patented "eyeball" method to locate them.

With the forward floor component and engine compartment bulkheads located

In their "as designed" locations, the driver's compartment looked claustrophobically narrow. My reference photos appeared to show more width in this area. As I had no intention of displaying the engine compartment open, the best solution was to move the LH engine bulkhead a bit to the right, which entailed shaving off a bit of the engine assembly, extending the drivers floor and foot panels a bit, and finally trimming down the width of the aft engine compartment bulkhead to suit. This final part was done in such a way as to preserve most of the raised detail on the panel.

#### GETTING BUSY - ENHANCING THE INTERIOR

With the basic interior envelope now sorted out, it was time to make the office look busy rather than just cavernous (if one can use this term on a 1:72 model). Up in the driver's compartment, the steering mechanism was built up on the forward bulkhead using styrene rod, strip and some wire with the tillers themselves coming from the Eduard PE set. The Eduard set along with a modicum of scratch built parts also provided some other nice enhancements in this area, with the instrument panel, various levers, quadrants, and such. It also provided the basis for the driver's seat, though some further enhancement by way of a Milliput seat cushion, and the addition of the height adjustment lever further helped the overall appearance.

Further back in the main compartment, the Eduard set was again used to advantage by providing a nice radio with

mounting tray. The tray set-up provided is for the M113 though, and is intended to be suspended from the ceiling. This is not appropriate for the M901, so the vertical elements were trimmed down and the assembly added to a shelf scratched from sheet copper and mounted on the left sponson. Another shelf fabricated again from sheet copper was added to the sidewall just above the radio assembly.

Other areas modified included the kit's internal (LH aft) fuel tank, which was missing the characteristic convex shape and had some inappropriate raised detailing on it.

#### CHEATER, CHEATER.....

"Hi, my name is Wayne, and I'm a scratch build cheater" (Chorus: "Hi Wayne"). So there...I admit it, I cheat when I'm doing some of my scratch building. Often times when scratch building parts down in this scale, it can be difficult to replicate the real thing exactly (I personally claim a defence of age induced vision degradation as well as being mostly all thumbs). Other times, even though it may be feasible, one must weigh off the effort involved in replicating something "exactly" versus any actual visual advantage that may be achieved. In cases such as this, I sometimes cheat and incorporate the major visual elements of the actual subject item, without necessarily replicating the finer elements. Such was the case with the retaining straps for the fuel tank. The Eduard PE straps and clamping provisions were a little lacking in relief so they were enhanced with some wire "springs" and PE strips



Fuel tank band clamps made from scraps of PE frets and .007" wire. A beer cap demonstrates that macro photography sometimes fails to convey the diminutive nature of some of the parts that we deal with in 1:72 scale.



Gunner's pedestal. Mostly styrene with a few bits of brass and even a piece of paperclip.



Pedestal ready for installation. The missile guidance box was came from the Dragon HMMWV kit.



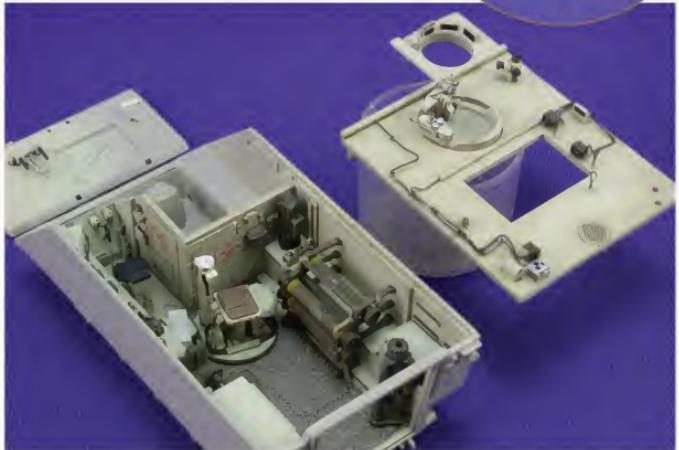
Turret traverse mechanism & controls. Add some paint and a few hydraulic lines and it is okay to install.



Fire extinguisher. The tapered nozzle was turned into some styrene rod chucked in my Dremel tool.



Completed extinguisher & one of my ID thumbs.



Almost ready to be buttoned up.



The three exhaust port in various states of completion. Milliput was used to create the tight radius that I couldn't accomplish just with heat bending.



A couple of the fittings that support the launch head when stowed for transport.



One of two scratch built smoke grenade storage boxes, a prominent feature mounted on the front of the M901.

and wire to better represent some of the clamping mechanism. Those few of you intimately familiar with the M113 series of vehicles may recognise that some but not ALL of the clamping mechanism was replicated for the reasons noted above. Hopefully I haven't offended anyone's sense of fidelity here. The PE upper conduit also suffered in this respect so this was substituted with strip styrene for more depth.

The interior of the M901 has a conspicuous number of wire harnesses, so an attempt was made to replicate at least some of them. Clipping provisions for the harnesses suspended from the ceiling were added using .010" diameter styrene rod, glued into locating holes drilled in the ceiling. After the cement had set, the rods sections were carefully sanded back to the correct height. The wires themselves were fabricated from lead wire, which is available in my corner of the world from better fishing stores. It's available in different diameters and I believe is intended to be used in the manufacture of flies (lures). It is great material to work with as it has virtually no spring-back and so generally stays where you put it.

#### THE ROAD TO NOWHERE

Several of the wire runs transitioned from the ceiling to the sidewall, and I knew that these would be difficult to install. I reasoned though that the entire run for other harnesses simply wouldn't be visible, so like the Talking Heads said in their song from the 1980s, you'll see in the in-process photos that some harnesses are on the "road to nowhere", but have been terminated behind structures which will not be visible when everything is buttoned up. More of this (compulsive?) cheating behaviour, I know.

The Commander's periscope was scratch built and located in the area immediately behind the driver. The eyepiece for the periscope was formed using the technique illustrated.

Further work on the interior involved cutting down the length of the left bench, and omitting the right bench in its entirety.

The TOW storage rack was completely scratch-built. I have always said that scratch building is usually fairly simple if you take your time and have suitable tools and materials at hand. Where

it becomes challenging is when you have to fabricate numerous copies of identical parts. These racks were such a challenge particularly in respect of the inboard stowage arms.

The canistered TOW rounds were a combination of examples lifted from the afore mentioned Dragon kit (which provides 4 full rounds) and scratch built using the remaining Dragon end plates along with styrene rod.

Many other components not included with the kits or Eduard set were fabricated from styrene sheet, strip & rod, with a smattering of sheet copper and left over brass frets used as well. This included the interior pedestal, post and control mechanisms.

I had no specific references for interior colours on Jordanian M901s so went with what seemed to be common for most other users, that being what I was told is referred to as "Sea Foam Green" (remarkably similar to the putish green colour seen in hospitals around the world). This was custom mixed using Gunze H50, H51, & H316.

A couple of the most obvious internal placards were cobbled together using bits of spare decals. The larger ones on the engine compartment bulkheads



Gunner's cupola with machine gun ring scratch built using heat formed styrene strip and wire.

that can be read even down in 1:72 scale left me with a bit of a conundrum. I assume that ones in Arabic would likely have replaced the English language warnings but I didn't have any definitive evidence one way or the other. Artistic licence being my prerogative here, I went with the later and I asked one of my middle eastern work mates if he'd mind translating these warnings into Arabic for me, which he was more than happy to do. The translation was transferred to some artwork quickly done in MS PowerPoint, and printed onto white decal film using my inkjet. So now I have placards which should say "Danger Monoxide Gas, Secure Panel Before Starting Engine" in



Frisker film laid over top of printed grid for creation of camouflage masks.



Progression of camouflage colour application.

Arabic, but knowing the dry sense of humour of my associate there is also the possibility that they actually say "Wayne's a wanker and his wife dresses him funny" or something to that effect. When and if I display the finished product at local shows and Arabic speakers start pointing and giggling at me, I guess I'll have my answer.

For internal stowage, I had the good fortune to stumble upon Mr. Tony Ivey on Missing Lynx's Braille Scale discussion group. Tony being a former M901 crewman had unique and first hand knowledge of the M901 and was able to provide me a wealth of knowledge regarding the vehicle. As Tony informed me, the M901 carried all of the ground launch pad equipment on the possibility that the vehicle became disabled. This way they'd still be able to launch their compliment of TOWs dismounted. I borrowed much of this equipment from the previously mentioned HMVM kit and mounted it in the areas that Tony identified for me.

#### **THE GREAT OUTDOORS - EXTERIOR MODIFICATIONS**

With the interior assembled and filled in, I now turned my attention to the outside of the vehicle. The roof needed some pretty extensive modifications and additions. Much of the moulded on exterior details (particularly the ties down loops) were inappropriate for the M901 variant and needed to be removed or relocated.

The ESCI turret is a good starting point, but it's far from accurate. The ESCI cupola is VERY simplified and one of the "must do" modifications for the ESCI turret to work properly on the Trumpeter upper hull was to modify the mounting point for the mast. Without this modification this area the turret will foul the driver's hatch when rotated. This modification proved a bit more complicated than originally envisioned, and strictly speaking my efforts aren't entirely accurate but I feel they are an improvement over what I started with. While I was at it, I ended up scratch building a completely new mast as the ESCI sample was a bit on the anorexic side.

#### **THE BUSINESS END - IMPROVEMENTS TO THE TOW LAUNCH HEAD**

ESCI's launch head provided a good base but is also rather simplified in a number of respects. The back end of the launcher should be open, but ESCI supplies a closing bulkhead, which look more akin to the M981's (FISTV) head. For the M901 this should be discarded

and lateral bulkheads installed. The sheet metal shrouds over the side actuators are moulded solid so these were sanded off and replaced by some formed brass, the actuators being fabricated from styrene rod.

ESCI represented the launcher sensor/designator suite with all of its various transparencies, by moulding them integrally to the launcher faceplate. Again being too simplified for my tastes, I removed this detail and scarfed out the housing on top of the head for the laser range finder. I borrowed the sensor/designator suite from the Dragon M1045 (HMVM) kit, modifying it with some sensor lenses fabricated using holographic confetti or back-painted clear styrene discs punched to the appropriate diameter using my punch & die set. Together with a scratch built the laser range finder head, these were mounted in the newly created space.

Also added internally was the control box in the aft compartment between the launch tubes, and some copper wire was used to replicate the rods used to eject the spent tubes from the launcher. One TOW round was built up from the Dragon parts and added to the right hand bay. Another, intended to represent a spent round, was made from aluminium tubing, drilled out to produce a thinner sidewall, with drilled out Dragon end caps attached with cyanoacrylate. This was added to the left hand bay.

Externally, I thought the surfaces of the launch head were a bit barren, so I added a couple of missing panel lines using a razor saw, and some of the bolt heads on the side panels, as well as the handle on the upper surface.

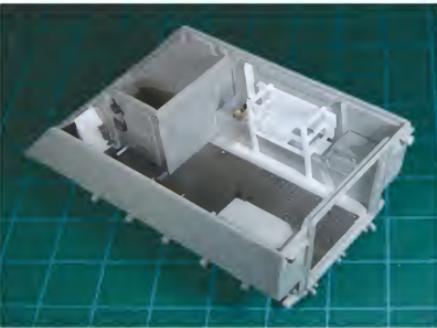
Moving onto the hull, there are a plethora of support fittings that the launch head and mast rest on during transit, which must be added. Also of note are the side shields that protect the loaders when fresh rounds were being inserted into the launcher. I chose to show these in the raised position.

The rear ramp was enhanced through use of some of the PE components from the Eduard set. Also added was the mechanism and cable used to close the ramp.

I elected to open the driver's hatch if for no other reason than to let a little more light in so that more of the interior could be seen. It should be noted that the M901's hatch utilises a modified hinge arrangement as compared to the basic M113. This must be scratch built as well. ▶



Dust skirts being "right-sized".



Setting up alignment for the missile storage racks.



The first scratch built periscope looked a bit beefy, so a second leaner version was made.



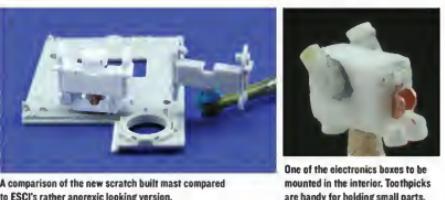
Scratch built driver's seat.



The starting point for the launch head.



Scratch built launch head mast mounted on ESCI's turret/cupola.



A comparison of the new scratch built mast compared to ESCI's rather anorexic looking version.

One of the electronics boxes to be mounted in the interior. Toothpicks are handy for holding small parts.



The scope of this project was bigger than originally intended, but the results were worthwhile.



The sharp eyed amongst you may be able to pick out my scratch built 1:72 padlock (almost certainly the smallest assembly that I have ever fabricated).

#### PREVIOUSLY ENJOYED

As mentioned earlier, I was quite struck by the new(ish) digital scheme being applied to Jordan's armoured vehicles these days. It does however add some complexity and challenge for the modeller. For this project I stuck with my favoured brand Gunze, with the exterior coatings consisting of altered base colours from their aqueous Mr Hobby range. The basic camouflage pattern was achieved by creating a grid map scaled to the approximate side profile of the vehicle and printed on some plain paper. The camouflage pattern was then laid out onto the paper grid with a mask created using frisket film overlaid onto the grid and cut to the pattern on the paper. Masks for the smaller geometric patterns

were also cut out into frisket film. A peculiarity of Jordanian vehicles done in this digital scheme is that if you look closely, on each side of the vehicle, a "block" that is shaped like the country of Jordan is applied. This shape was also created with a frisket film mask.

After completion of the basic camouflage, I used some countershading with lightened base colours, and then applied some yellow, orange and brown filters using heavily thinned (approx 95%) Humbrol enamels to add some tonal variance and depth to the finish so it didn't have that "fresh from the showroom" look. This was followed up by some subtle rain/dirt streaking to further enhance the slightly weathered appearance.

I do this by applying a small dot of a suitably coloured Humbrol enamel (lightened base colour for rain stains, dirty brown for dirt/grime), which is "pulled down" with a brush slightly dampened with Testor's brush cleaner. If the results aren't to your liking, you can just wash off the offending area with a brush or Q-tip loaded with the brush cleaner and try again (got to love techniques that can be "undone" if required).

The next step was to apply a coat of Vallejo Matt Clear followed by a dry of drybrushing to pick out the high points using Humbrols. I prefer to dulcoats prior to drybrushing, as the matt finish tends to hold the paint a bit better than the Gunze's base semi-gloss finish.

Finally, to give it that previously enjoyed (i.e. "used") look, some light scratching and chipping was accomplished using a black/brown mix of Humbrols, applied using a sponge brush, lightly dabbed in areas that would likely see some abuse or heavy foot traffic (e.g. ramp, around the drivers hatch, forward edge of the loaders hatch, etc). Being an aluminium hull, one could question if the colour selection is entirely appropriate, but in looking at reference pictures of "beat-up" M113 hulls, most scratches still appear to be a dark colour, rather than that lighter grey look of oxidized aluminium.





Launch head and upper hull detail.



MV lens headlights make a big impact considering their small size.

The tracks were painted separately then added, followed by the side skirts. I used a lacquer base coat of Alclad "Jet Exhaust" in the hopes that it would "bite" into Trumpeter's rubber tracks, but even with the lacquer they still didn't hold the paint all that well. The track pads were painted with Vallejo's grey-black with a subsequent coat of Vallejo semi-matte to seal the base coat which allowed me to then apply various Humbrol washes, which imparted a rusty brown/orange look to them. Finally some dusting was accomplished using Mig pigments.

A few finishing touches including some stowage for the side basket, MV lens headlights, antenna, red back-painted transparent tail lights,

and various transparency faces were added to wrap things up.

After all was said and done, I must say that this project went a little beyond my originally intended scope, but I did enjoy it. Never be afraid to pick up that gauntlet thrown at your feet by fellow modellers. It's usually a great opportunity to build on your skills base. Thanks Will!

#### ACKNOWLEDGEMENTS

Thanks to William D. for throwing down the gauntlet and giving me the initial push.

Many thanks to Tony Ivey, fellow Braille scale modeller, and former ITV driver and gunner, who provided invaluable technical support to me during the course of this build.

Mr Gaetano Pisano and Mr. Aris Kosionidis also provided some great reference material on Jordanian M113 variants with the digital scheme.

Thanks also to the scores of other folk on the "Modern" Discussion Board on Missing-Lynx, who patiently (mostly) answered a number of my questions on this and other modern subjects.

Most importantly though, thanks to my patient wife and daughter, both of whom saw very little of me during the final push to get this project completed. There's just no substitute for a supportive family (and yes dear, I'll make sure that I get the grass cut more often now... well, until the next project anyway.) ■



## Modelspec

ESCI 1:72 M901 Hammer Head

Kit No. 8306.

Trumper 1:72 M113 ACAV

Kit No. 07237

## Accessories and Materials

MV Headlight Lens

Parts from Dragon's M1045 HMMV kit

Edward Photo-Etched detail sets

Silicone sheet, strip and rod

Copper sheet

Left over flets from brass photo-etched sets

## Paints and Finishing Products

Gunze acrylics: H50, H51, H316

Humbrol enamels (various)

Alclad Jet Exhaust

Vallejo: Grey Black, Semi-Matt

Mig Pigments

Testor's brush cleaner

Interesting project using widely contrasting kits.

I wish the ESCI kit was as good as the box art!

## Available from

Trumpeter kits are distributed in the UK by  
Pentagon Ltd

Rating 



Three of the four marking options.



The kit decal sheet.

# TANK OF STEEL

The Editor reviews Tamiya's brand-new 1:48 scale JS-2, named after Josef Stalin - the Man of Steel.

The T-34 tank was already entering service by the beginning of the Great Patriotic War. The KV series of heavy tanks was also in service at time the Wehrmacht swarmed across the Soviet border in June 1941. Although the T-34 and KV-1 were more than capable of dealing with this first generation of German Tanks including the Panzer III and Panzer IV, the new Tiger and Panther tanks encountered in 1943 were another matter entirely.

The 76mm guns of the T-34 and KV series tanks were ineffective against these powerful new vehicles, so the 85mm anti-aircraft gun was adapted for use in the KV-85 tank. This stop-gap vehicle received increased frontal armour, an improved turret and overall reduced weight compared to the heaviest KV tanks. This new vehicle was named Josef Stalin in honour of the Soviet leader.

Only a small number of these IS-1 tanks saw service, however, as the more powerful A-19 122mm gun was selected as the standard weapon for this series. This gun offered excellent performance in the anti-tank role and was also effective against

fortified defensive positions. The installation of the bigger gun resulted in the Josef Stalin 2.

The IS-2 entered service in 1944 as a breakthrough tank. This formidable new weapon proved itself emphatically against the most heavily armoured German tanks. During the fighting around the bridgehead on the River Vistula in August 1944, IS-2 tanks of the Red Army's 71st Guards Independent Heavy Tank Regiment knocked out four Tiger IIs for the loss of three of its own vehicles.

Although the IS-2 weighed in at around 40 tons (the same as the German "medium" Panther), the Soviets classified it a heavy tank. This was not entirely without justification. The sheer weight of the 122mm shell compensated for the lack of muzzle velocity. It was a potent and effective answer to the heavy frontal armour of even the best German AFVs.

However, the IS-2 did not prevail in every encounter with its German adversaries.

The IS-2 was withdrawn from front-line Soviet units following the introduction of the more streamlined IS-3 in 1945. The IS-2 continued in service with the armies of China, North Korea and Cuba well into the Cold War era.

We see both "JS-2" and "IS-2" used to describe the family of Stalin tanks.

The original IS-1 tank was named in honour of the Soviet leader. "Josef" is a closer translation of Stalin's first name, while "Josef" is more anglicised, but both versions are widely used.

Following up their excellent 1:35 scale kits, Tamiya has now added a 1:48 scale JS-2 to their growing Stalin family.

Tamiya's 1:48 scale JS-2 is an all-new kit comprising 211 parts in dark green plastic, four metal ingots, four polythene caps, a

length of string and markings for four vehicles.

Moulding quality is every bit as good as the 1:35 scale kit. Exterior detail is also very good indeed. Surface texture represents the rough casting of the real thing. The shovel, saw, horns, lights, barrel lock and other hull details are all separate parts.

The only real concessions to scale compared to the 1:35 kit is that the suspension arms for the road wheels are moulded as part of each lower hull side and the engine vents are moulded as solid plastic. The headlights are also solid plastic.

Turret hatches are separate and may be posed open.

The Commander figure is well moulded and nicely detailed.

In common with its big brother, this JS-2 includes injection moulded link and length tracks. The long top run features convincing drapery between the return rollers, while the curved runs around the drive sprockets and idler wheels are made up by multiples of two-link sections.

Unlike some of Tamiya's earlier 1:48 scale kits, the lower hull is all-plastic. However, if you yearn for full 1:48 scale 46 tonne weight, Tamiya does supply four metal ingots to be fitted inside the lower hull. These are not structural though, so their use is purely optional.

Instructions are clearly called out in 14 illustrated steps.

Markings are supplied for four vehicles.

Tamiya's 1:48 scale JS-2 should be a fast, easy build as we have come to expect from this excellent series. Highly Recommended. ■

Thanks to Tamiya Japan for the sample [www.tamiya.com](http://www.tamiya.com)

Tamiya kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)



The one-piece upper hull.



The turret is split into upper and lower halves.



Nice cast texture on the mantlet.



The suspension arms are moulded to the lower hull.



Link and length tracks with built-in droop are provided.



Crisply detailed road wheels.



Metal ingots are supplied to lend a bit of scale weight to your 1:48 JS-2.



The Commander figure is well done.

To have your event included on this page, send your details to:  
**Diary Dates**, ADH Publishing, Doolittle Mill, Doolittle Lane,  
 Totternhoe, Bedfordshire, LU6 1QX, UK  
 Tel: 01525 222573 • Fax: 01525 222574 • Email: [editor@modelmilitary.com](mailto:editor@modelmilitary.com)

### May 20th

RAF Museum Hendon Model Show  
 The date for the next Hendon Model Show has been fixed for Sunday 20 May 2012 from 10 am to 6 pm. The show will be held at the Royal Air Force Museum, Grahame Park Way, London, NW9 5LL.

This is the show's fourth year and we have been pleased to see consistently increasing numbers of visitors from both the modelling community and general public.

We are now opening booking for traders and clubs. To register your club please email [hendonmodels@yahoo.co.uk](mailto:hendonmodels@yahoo.co.uk) For more information, please visit [www.rafmuseum.org/](http://www.rafmuseum.org/) whatson

### June 2nd

**TORBAY MILITARY MODELLING SOCIETY MODEL SHOW 2012**  
 With IPMS TORBAY & SOUTH DEVON

Torquay Town Hall, Castle Circus, Torquay TQ1 3RD  
 Special competition theme this year Suez 1956. Club & Trade Stands. Competition, Refreshments. 9.30am to 4 pm  
[www.torbay-ipms.org.uk](http://www.torbay-ipms.org.uk)  
 Contact Paul Farrar: [paulfarrar@live.co.uk](mailto:paulfarrar@live.co.uk)

### June 3rd

**NORTHERN SCALE MODEL SHOW**  
 The Northern Scale Model Show will be held on Sunday 3 June 2012 at Temple Park Leisure centre in South Shields, Tyne and Wear NE34 8QN.

Organised by Tyneside IPMS, this is one of the North of England's biggest and best model shows. One huge open hall full of displays, traders and open competitions.

£3.75 Adults, £2.00 Children and Concession.  
 Booking details: Graham Trotter 01782 721463

### June 17th

**MAFVA NATIONALS 2012**  
 The date has been determined for the vehicle show and thus the MAFVA nationals for next year: Sunday June 17th 2012 (Father's day). And more good news, we appear to have a marquee as well! More information will be available in coming issues.

### June 23rd

Amay Modèles Club 19th Modelling Day.  
 On 23 June 2012, Amay Modèles Club presents its 19th Modelling Day (exhibition and swap meet) at the IPES Huy, 6 Avenue Delchambre, B-4500 Huy (Belgium).

For further information, please contact Michel Calluy, 13 Thier du Moulin, B-4530 Villers-le-Bouillet (B). tel: 00 32 85 231086 e-mail [michel.calluy@skynet.be](mailto:michel.calluy@skynet.be) All the details are available on our AMC Web site [www.amaymodelesclub.org](http://www.amaymodelesclub.org)

### July 1st

**IPMS Staffordshire Moorlands Model Show.**  
 IPMS Staffordshire Moorlands Model Club in association with 235 (City of Stoke on Trent) Sqn A.T.C present their 3rd Model Show on Sunday 1 July 2012 to be held at the T.A Centre, Martin Leake House, Stonor Street (off Waterloo Road) Cobridge, Stoke on Trent, Staffs. ST6 3HJ  
 In support of Help For Heroes. There will be a open competition for Seniors & Juniors, separate competition for Air Cadets. Ample free parking, licensed bar, refreshments available courtesy of the T.A  
 Admission: Adults £2.50  
 Children & Concessions £1.50  
 Doors open 10.00am to 4.30pm. For further information contact John Lingwood (Show Manager) 01782 721463 Club website <http://smmc.co.uk>

[moonfruit.com](http://moonfruit.com) or follow link on the IPMS website.

### July 7th-8th

**FIGURE WORLD 2012**  
 7th July 2012 SHOW  
 8th July PAINTATHON  
 The Great Hall, Oundle School, Oundle, PE8 4GH  
 The figure modelling show of the UK. If you are a figure modeller, don't miss out on the only event in the UK that has been put on to meet your needs.  
 For more information: [www.tbfigureworld.co.uk](http://www.tbfigureworld.co.uk) [www.tbforum.co.uk](http://www.tbforum.co.uk)

### August 19th

**LETCHWORTH MODEL SHOWCASE 2012**  
 Letchworth Scale model club is proud to announce MODEL SHOWCASE on Sunday 19th August 2012 Our new venue is The Broadway Hotel Ballroom, Letchworth, SG6 3NZ (Next door to Morrisons Supermarket) less than a minute from Letchworth station. Ample parking at the venue and at the town centre carpark less than 3-4 mins away  
 Doors Open 10.00.  
 Trade stands, visiting clubs and demos, 20 class competitions. Wargames demos/participation games. And if you get peckish there is everything from a sandwich to a 4 course meal, and a bar for the non drivers  
 For further info please contact Bob Parker 01480 891710 or email [robremparker@sky.com](mailto:robremparker@sky.com), or Frank Henson, 01462674020

### August 25th

**The Edmonton International AFV Model Show, Open House & Military Vehicle Display.**  
 The annual EIAFVMS will be held on August, 25th, 2012. The show will be held at HMCS Nonsuch, 117 Street, Edmonton, Alberta, T5G 3E8, Canada.

Will have Military Artists: Ron Volstad and Robert Bailey, & vendors present.

Registration Sat: 09:00 til 12:00, show goes to 6pm.

ArmyMotors will be present to display historical Military Vehicles, with re enactors as well. Present day Military vehicles and open house. Contact for more info:

**ANTHONY SEWARDS:** [teutonicknights@shaw.ca](mailto:teutonicknights@shaw.ca)  
**Jon Banian:** [jonbanian@shaw.ca](mailto:jonbanian@shaw.ca)  
**Rod Dumouchel:** [krdumouc@telus.net](mailto:krdumouc@telus.net)  
**Website:** [www.aafvms.ca](http://www.aafvms.ca)  
**Facebook:** Edmonton International AFV Show  
**Mailing Address:** EIAFVMS - PO Box 71071, Edmonton, Alberta, T5E-6J8 CANADA

### September 8th-9th

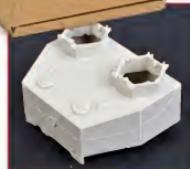
**QMHE 2012, BRISBANE AUSTRALIA**  
 17th Anniversary 2012  
 Queensland Model Hobbies Expo and Queensland Scale Modeling Championships, will be held at the Brisbane Table Tennis Association Stadium, Green Terrace, Windsor (Downey Park), Brisbane, Queensland 4030, Australia from 9.00 am to 5.00 pm Saturday 08 September and 9.00 am to 4.00 pm Sunday 09 September 2012.  
 Visit [www.qmhe.com](http://www.qmhe.com) or contact the Secretary; [secretary@qmhe.com](mailto:secretary@qmhe.com) for more information.

### October 6th

**Abingdon IPMS Model Show.**  
 Larkmead school, Abingdon, Oxon, OX14 1BB  
 Open from 10.00-16.00  
 Adult £3, con/OAP £2  
 There will be approximately 20 traders, 30 clubs stands, competition and Burger van.  
 For further information or booking details contact Simon Fisher email: [simonfisher2008@btinternet.com](mailto:simonfisher2008@btinternet.com) or 07769 345271



# Incoming



## LIFECOLOR

### GUNS & WEAPONS CAMOUFLAGE SET

ITEM NO. CS 26

I must start this review off by saying I am quite the fan of this manufacturer's paint and continue to be as they release interesting and useful additions to their acrylic paint detailing range.

This set provides six 22 ml plastic bottles neatly packed in a very attractively presented box. The included gun finishing colours are Gun Blue, Gun Red and Gun Grey as well as two wooden stock colours in both light and dark. The instructions for use are clearly printed with simple images on the rear of the box to assist the modeller in getting the most from these paints.

The process of creating a suitable metallic sheen on the barrel or weapon body of your choice involves mixing the sixth supplied bottle of "Reflecting Agent" which appears to be very finely ground graphite, with the Gun colour finish of your liking. This is then polished to impart the desired coloured metallic finish to the kit part.

In my opinion, the wooden stock colours will form a nice base colour on which to further apply any of your preferred wood grain finishes in the style of your choice and of course you could just simply leave the wooden base colour as is to obtain a reasonable representation of the timber gun stock.

This is another well produced paint finishing kit for military modellers and I believe will also have applications across other modelling areas.

Recommended.

Lifecolor paints and finishing products are available online from The Airbrush Company [www.airbrushes.com](http://www.airbrushes.com)

Ross Ferrer

## INSIDE THE ARMOUR

1:35 SCALE

### CHURCHILL ARV II CONVERSION

ITEM NO. 35051

It is always a treat to see Inside the Armour's new releases cross the desk, so I was pleased to see their 1:35 scale Churchill ARV II arrive this week. Pleasure turned to amazement, however, when I opened the fairly innocuous brown cardboard box. Chris at ITA has managed a Tardis-like packing job to fit a huge number of resin parts inside this compact container.

This is a remarkably comprehensive conversion. I confess that I was a little too intimidated to actually count all the greenish grey resin parts, but I can confidently estimate that it is more than several hundred. The main conversion elements include the new superstructure with its dummy gun, winches, the main jib and a host of other details including a detailed driver's compartment interior and internal winch gear.

The conversion also supplies brass cable, a brass Besa gun and bonus photo-etched tools and toolbox.

Options abound. On vehicle tool stowage may be depicted open or closed. The spade can be depicted stowed or deployed. The jibs may be depicted stowed or deployed – and much more.

Instructions are supplied as a PDF on disk. Chris has also included two additional folders on the disk with walk around reference photos of surviving vehicles – very handy considering the complexity and detail of this conversion.

Casting quality is very high, but a reasonable amount of time should be allocated for removal and cleanup of the parts. Indeed, cleanup and familiarisation with the parts and the construction sequence might be the most time consuming aspects of this build. I could not find any casting imperfections on my sample. The resin parts are supplemented by two generous photo-etched frets.

This conversion started life as Cromwell Models' full 1:35 scale Churchill ARV II kit, but Inside the Armour has obtained the masters and adapted the parts to fit the excellent AFV Club Churchill kit.

The complexity, number of options and sheer parts count means that Inside the Armour's 1:35 scale Churchill ARV II conversion will be best suited for experienced modellers, but time and patience will result in a truly remarkable model.

Highly Recommended.

Inside the Armour products are available from their website [www.insidethearmour.com](http://www.insidethearmour.com)

Brett Green





## DRAGON

1:35 SCALE

LEFH18/40/2 (sf) AUF G.W. PZ.KPFW.III/IV

KIT NO. 6710

Dragon's latest kit is of the prototype self-propelled FH18 howitzer that was based around the hybrid Panzer III/IV hull. It was the same hull that made up the Nashorn, but whilst that vehicle went into production this one did not. The only prototype was captured at war's end and, until recently, spent its life at the Imperial War Museum, London.

Just over three years ago now I had the privilege of being visiting The Wheatscroft Collection. One of the highlights of that day was being able to crawl over, and inside, this vehicle. Inside it is cavernous, and very much as Dragon have depicted it here. They have done it proud in this release.

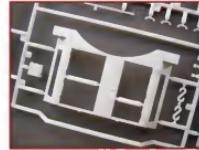
The kit comes in a box brim-full with parts. In fact you get approximately 1066 parts of which 245 are unused. All of this comes on 24 individual sprues, plus one etched fret and markings (surprisingly) for one vehicle only. Over 50% of the kit is newly tooled, with the rest being Dragon's standard Panzer III/IV running gear, tracks and associated tools etc.

Everything is cleanly cast with no flash. There are also no visible knock-out pin marks on any parts. In fact the large gun shields and superstructure parts are commendably thin and with no blemishes on them whatsoever. You have the option of building the gun on the vehicle (with the carriage, trails and wheels secured to the back plate), or deployed separately. The 10.5cm I.FH18/40 gun is newly tooled and based upon the carriage and trails of a standard 7.5cm PaK40, but the wheels are from the 15cm s.G33. A fully detailed fighting compartment is included, complete with stowage lockers and some ammunition, although the driver's compartment is empty.

Turning to the hull, you have Dragon's normal 'Smart' Panzer III & IV suspension units, sprockets, idlers and roadwheels. The Magic Tracks are hand-ed and thoughtfully moulded in two colours to differentiate between the left and right sides. The instructions are typical Dragon in that there are sub-assemblies contained within sub-assemblies but this kit is not as bad as others so just take care in construction. In summary, this is a unique kit of a one-off vehicle that still exists in remarkable condition. It is very well detailed, although I must say that I have not compared its dimensions to available plans. Full marks to Dragon for what is a substantial new tooling project for a one-off model.

Highly recommended.  
Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)

Graham Tetley



## S.A.S. Recon Vehicle "Pink Panther"

No 6501 1:35

ITALERI

## ITALERI

1:35 SCALE

S.A.S. RECON VEHICLE "PINK PANTHER"

KIT NO. 6501

With its garish finish, nobody should have to ask why this vehicle was nicknamed "Pink Panther". Italeri originally released their 1:35 scale S.A.S. Recon Vehicle "Pink Panther" more than 20 years ago. This time around, the sprues have been cleaned up but the basic contents appear to be the same. Specifically Italeri's model represents a 109 inch wheelbase modified Series IIA Land Rover. This kit should not be confused with Tamiya's even earlier Pink Panther kit – they are completely different offerings.

Despite its age, the Italeri kit still looks acceptable. Plenty of tools, stowage and weapons are supplied. The wheels are all-plastic and look nice. Sand channels are provided too.

The two areas where help is really required are the solid-moulded grille, and the headlights, which are also moulded integrally with the front moulding. Fortunately, Eduard has released a photo-etched upgrade that will address the grille, while some careful drilling and a set of Mv lenses will be a big improvement to the headlights. The featureless seats could do with replacing too.

The front of the vehicle is designed to be built up and there is no engine supplied, although there is rudimentary sump and drive train detail underneath.

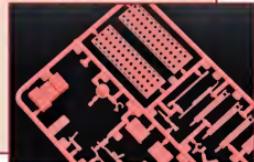
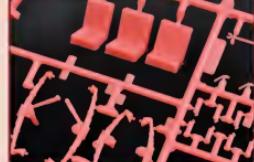
There are no decals either. The instructions suggest that you paint the raised lettering on the plastic number plate.

In addition to being built from the box as an S.A.S. vehicle, this kit also offers some intriguing possibilities for conversions to other Land Rover variants when combined with other kits.

Recommended.

Italeri kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Brett Green





# Small Scale A round-up of the latest news and releases in 1:72 and 1:76

## Autoblinda AB 40 Ferroviaria

1:72

Italeri



No 7064

1:72

Italeri

+1



### ITALERI

1:72 SCALE

#### AUTOBINDA AB 40 FERROVIARIA KIT NO. 7064

When I first saw Italeri's AB 40 I had to double check that it actually was a 1:72 scale kit, as it comes in a large (A4 size) end-opening box. The design of the box follows the usual Italeri style and quality with an excellent illustration on the front and three view colour schemes of an Italian and a German version on the back.

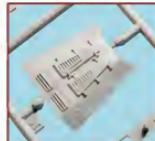
The Autoblinda AB 40 armoured car was designed for the Italian army in the 1930s and was ahead of its time, having four-wheel drive and four-wheel steering. Only a small number were built before it was superseded by the AB 41. Some of the AB 40s were converted to use the railways as modelled here as the AB 40 Ferroviaria. They were used by the Italians, and later the Germans for anti-partisan duties.

The contents of the box consist of two light grey styrene sprues in a sealed poly bag, a well laid out instruction sheet and a small decal sheet. Having built some Italeri 1:72 scale kits many years ago, I was intrigued to see how the new kits recently released by the company stand up to the likes of Dragon, Revell, etc. I can happily report that the kit looks very good indeed. The moulding is excellent with no flash to speak of and parting lines easy to clean up. The breakdown of parts looks to be well thought out, but the fit will have to wait for a build! There are some ejector pin marks, but these are in places that will not show on the final assembly, and the sprue attachment points are small and well placed.

The details on the hull and turret are well moulded and with careful painting and weathering will make great model. The turret hatch can be built open or closed but the hull doors are moulded closed, but with good hinge and latch detail. The road wheels have good tread patterns with a slight seam to clean up, and the rail wheels have excellent hub detail. There are separate pioneer tools and a short section of rail track to set off the finished model. All in all I can thoroughly recommend this new addition to the Italeri range, an excellent kit of a rare and unusual vehicle.

Highly Recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)  
Steve Shrimpton



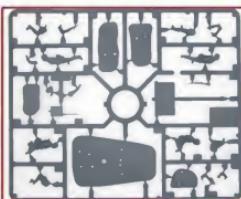
### ZVEZDA

1:72 SCALE SOVIET NAVAL INFANTRY 1941-1943 • ITEM NO. 6146

This is a simple set of four figures and an optional base moulded in a dark green plastic. Part of the gaming system, Art of Tactic, it also comes with a gaming card for that system. Two of the figures are ready for painting whilst the others have one or two parts to add. The plastic is an interesting hybrid between hard plastic and softer styrene. It looks like it will be easy to both work with and paint, and that paint should adhere well. Overall, the dimensions and poses look good and the detail is well proportioned.

Highly Recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)  
Alex Clark



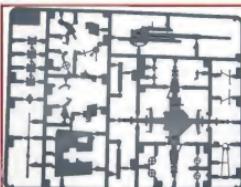
### ZVEZDA

1:72 SCALE GERMAN RECONNAISSANCE TEAM • ITEM NO. 6153

Similar to the Soviet Naval set, this is part of the Art of Tactic gaming system and also comes with a gaming card, four figures and a base. Moulded this time in a mid-grey version of the same plastic, the figures also come with a few more parts. Again the moulding is good, with well-proportioned and detailed faces and uniforms.

Highly Recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)  
Alex Clark



### ZVEZDA

1:72 SCALE FLAK 36/7 GERMAN HEAVY ANTI-AIRCRAFT GUN • KIT NO. 6158

This is a larger set than the previous two. Along with the four figures it also contains a Flak 36/37 gun.

The parts come on two sprues of mid-grey plastic and the parts are all moulded well with no flash and little clean up required. It's also a snap-together kit, so no glue is necessary. There are a few ejector pin marks, mostly hidden though. The gun shield is a little on the thick side, although it's hard to achieve a scale thickness in 1:72 without resorting to photo-etched metal.

The figures are well proportioned with very good poses – several photos on the rear of the box show how well they fit with the gun. A small decal sheet is included with kill rings for the gun.

Recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)  
Alex Clark

## DRAGON

1:72 SCALE

IA Type 95 'Ha-Go' Light Tank

KIT NO. 7402

It wasn't that long ago that Dragon released their first Second World War Japanese subject in small-scale and it is good to see they are continuing to support this area.

Dragon's 1:72 scale IA Type 95 'Ha-Go' Light Tank is moulded in the usual light grey plastic and comes as a single sprue and a separate upper hull piece and lower hull tub. The tracks are the now standard Dragon Styrene (DS) and there's a single photo-etched piece for the grill over the exhaust. The detailing is particularly impressive and very finely done. In particular, the numerous bolts and rivets (some of which are very small indeed) are perfectly represented. Markings are provided for two very similar camouflaged vehicles.

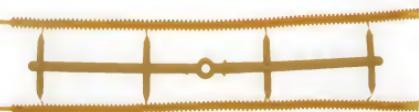
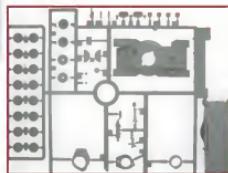
Even out of the box this will make a well-detailed model and given the small number of parts will be a quick build.

This is another winner from Dragon and packs in an amazing amount of detail for such a small vehicle.

Highly recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)

Alex Clark



## DRAGON

1:72 SCALE CHURCHILL MARK IV  
KIT NO. 7425

Despite being one of the better known armoured vehicles of the Second World War, the Churchill has been under-represented in 1:72 scale with only a couple of quite old models being available from Esci and Hasegawa.

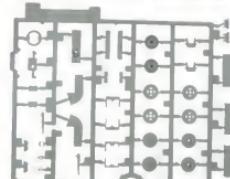
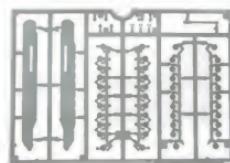
Dragon's new Churchill kit represents the Mark IV variant, being largely similar to the earlier Mark III but with a return to the cast turret as opposed to that version's welded one.

As is usual, the moulding is of a very high quality and given the parts breakdown the kit should assemble quite easily. Detail is good, although I was a little disappointed to see moulded on tools. This also includes the hull side cables that would look better moulded separately. I was glad to see that both the turret hatches are separate, allowing crew figures to be added if desired. Tracks are the flexible DS single run pieces and the instructions suggest the track be gently stretched or trimmed to fit. Markings are limited to a single, all over green vehicle and for this particular kit there are no extra photo-etched parts.

Recommended.

Thanks to The Hobby Company Limited for the sample [www.hobbyco.net](http://www.hobbyco.net)

Alex Clark



## DRAGON

1:72 SCALE LVT-4  
WATER BUFFALO  
AND 1/4 TON 4X4  
TRUCK

KIT NO. 7389

This is one of Dragon's 1+1 kits where two vehicles are included in the same box. The LVT follows from the earlier releases of the LVT(A)1 and LVT(A)4 and hence share a number of common parts.

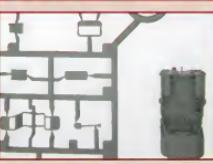
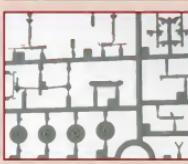
The rear ramp can be optionally set in the open or closed position and there is some very well done interior detailing, including the wooden seats that may also be modelled in the open or closed position. The Jeep is a small but very well moulded and detailed little kit. Again there are more options with this, including a choice of weaponry for the pintle mount (machine gun or bazooka). The windscreens is a suitably thin piece of clear plastic and includes the frame. This means there will be no fiddly fitting of the glass part to the frame later. A sensible approach from Dragon!

Markings are provided for three vehicles for each of the LVT and Jeep, although all are single colour, Olive Drab examples. Along with two covering the Second World War, one set of marking is for a mid-1950s vehicle as seen in Indo-China.

This is a great combination set.

Highly Recommended.

Alex Clark





## YES, I'M OLD AND YES I'M GRUMPY!

I remember when I was young (now, that's sound like a song!) and used to attend monthly meetings at my local model club, I used to roll my eyes at the old guys always complaining about something or other. There was always something wrong with a kit, the state of the hobby, the latest movie or indeed life in general.

I said to myself then and there, I wasn't going to become like those guys man... no way.

Fast-forward some 30 years and while I was on a quite popular online modelling forum, the old guys were at it again. The funny thing is, these now old guys were the same age as me! A thought crossed my mind at that point (apart from the fact I was now a fully paid up member of the old boy's club) that some things never change. Indeed, a famous psychologist and social commentator once said that 90 percent of conversation consists of complaints. We as a group often whinge and moan about the latest kit or accessory with some even condemning a kit without actually seeing the kit in question! The post on this previously mentioned forum (and subsequent threads) consisted of a wholesale "roasting" of a current movie now showing in the cinemas. Come on guys. It's entertainment and reality is tweaked to make the movie interesting! How do you think the paleontologists of the world felt about the dig scene in *Jurassic Park*? Or the way musicians feel about the typical recording session seen on film, the list goes on.

Simply put, reality makes for a very historically accurate and indeed would make an incredibly boring movie - most of the time they would just sit around! I go to the movies to be entertained. I make 1:48 scale models to have fun and that's what it's all about really. Re-reading this opening

piece I now know that I am indeed old and grumpy. Time for nice hot cup of tea and a good lie down I think!

Until next time *Luke Pitt*



### FRENCHMAN RIVER MODELS WORKS

17" UTILITY BOAT WATERLINE HULL

O SCALE (1:48 SCALE)

KIT NO: 125

I must say that I have never heard of this manufacturer up until now but in any case they have produced a very unique kit. The parts come packaged in a sturdy cardboard box with a colour picture of the finished and painted kit as well as contents on the top also including a brief description of the boat style, and suggestions for displaying the kit with additional products also from their range.

Inside we have a very comprehensive set of printed instructions covering kit contents, and clearly marked part numbers, recommendations for construction, painting tips and a detailed and well thought out assembly instructions. Some of our mainstream plastic model companies should take note.

The boat is constructed from a combination of cast resin parts, finely cast white metals parts, laser cut wood parts and some fine tulle netting. If this doesn't mean "multimedia" then I don't know what does.

The one-piece boat waterline hull is beautiful with some of the best resin cast representation of wooden plank detail I have seen for a long time. The outboard motor is also wonderfully cast in white metal and includes a resin motor cover that will allow another display option. The laser cut oars, fishing pole, net frame and seats are also beautifully produced and will require careful removal from the surrounding thin wooden sheet. In summary, this well thought out and well produced little kit will look at home on any "O" gauge or 1:48 scale diorama involving water. The only thing missing is the fish and in typical fashion I'll simply claim that the big one got away! Highly Recommended.

Frenchman River Model Works products are available online from their website [www.frenchmanriver.co](http://www.frenchmanriver.co)

*Ross Ferro*



## Luke Pitt hosts MMI's examination of the growing world of 1:48 scale military models, figures and accessories.

### MMI 1:48 Scale Q&A with Bruce Culver

Bruce Culver really needs no introduction. His work on the iconic "Panzer Colours" series of books has been an inspiration to many. Bruce was trained as a medical and biological illustrator, and worked for 13 years at a medical school and teaching hospital in New York. He then accepted an offer from Jerry Campbell of Squadron/Signal Publications to be their editor, which brought him to Texas. After a year and a half, they parted company. He then worked in the defence industry, first for LTV Corporation (and its many descendants), then for Lockheed-Martin. He started as a technical writer and ended his career as a course developer and instructor. Bruce is now retired and is preparing research for several novels as well as informal modelling articles. I believe we owe Bruce a debt of gratitude, as without him the hobby would be a much poorer place.

#### THE INTERVIEW

**Luke:** Good to have you with us this month Bruce. Can you tell me what prompted you into the hobby in the first place?

**Bruce:** Wow Luke, what a question! I have been modelling since I can remember, going back to the 1940s and wooden Strombecker kits – I remember the Pioneer locomotive, the Conrail airliner, and the B-24J Liberator from those days. Later, of course, it was Aurora and Revell, then Monogram, and up to the present. As an adult, I was first interested in aircraft and wrote a few articles for IPMS on the Revell 1:32 scale fighters in the mid 1960s. I switched to the armour side because we had a small wall unit that would hold only a few models to save them from the cats, and it would store far more tanks than planes. I still like aircraft models, but the tanks take up less space...

**Luke:** So you got into armour due to the space constraints of aircraft – this sounds like me! Anyway, can you give me an insight into what prompted you to write the Panzer Colours series of books?

**Bruce:** A distressingly easy answer: Jerry Campbell asked me to write this series. It was proposed by Bill Murphy, but Bill was not a writer, so Jerry gave me the task of putting the series together. I contacted a number of people, and Gen. Roll Stoves, who served in the 1st Panzer Division in WWII, provided me with an encyclopaedic stream of material he prepared himself – dozens and dozens of pages of typed and written information, with pasted in insignia, symbols, and other details. I still have the box with all his information in it. Later, for PC II and III, we contacted a number of German veterans' organizations, and a number of them supplied material as well. I have signed letters from several well-known people, including Gen. d. Pz Trp Hasso von Manstein.

**Luke:** Who do you admire in the modelling world?

**Bruce:** Anyone who does this thing we do very well and helps others enjoy the hobby: I've been privileged to know some of them – Shep Paine, Steve Zaloga, James Sharp, a lot of very talented modellers in IPMS and AMPS, and also the vendors who produce the kits we buy, especially the "cottage industry" crowd who

keep interesting things coming. There are loads of very talented modellers in all scales – I just saw Pat Johnston's build of the A34 Comet in 1:48 from Fighting48 and it's superb on all counts [looks like 1:35].

**Luke:** Given your experience in the hobby [don't roll your eyes Bruce!] what great innovations have you thought made a difference to the hobby?

**Bruce:** One is the greater attention paid to accuracy and fine detail – the standards today are much higher and the quality of modelling is much better than in years past. I know a lot of modellers hate the "rivet counters", but those are the people who have pushed the standards higher. This benefits the "average" modeller as well as the "detailer". Another is the use of technology to improve the modelling process – CAD design, CNC machining, and now 3-D printing, which can do some things no other process can accomplish. All the resin parts for the 1:48 A34 Comet kit were first made by 3-D printing, then cleaned up and used to make the moulds for the production parts. The last innovation, perhaps the most revolutionary compared to many years ago, is the development of the aftermarket industry of resin parts and photo-etched (PE) metal, which allow the addition of small details to the injection moulding process can't do, and also conversions to versions of the subject that might not be done any other way.

**Luke:** Bruce, I know your love for 48, what do you consider its strengths?

**Bruce:** Well, George Bradford and I always considered 1:48 the ideal armour scale if you wanted to build a good number of kits. The finished models were small enough they didn't take much space, yet large enough to add all the detail you could readily see. Those are still strengths, plus the faster building times. There's also the easier time a modeller has in building "large scene" dioramas, because they don't require a whole room to display. Including the resin kits available from Europe and Asia, and the possibility of kit-bashing both resin and injected plastic kits, there is almost as much subject choice in 1:48 as in 1:35. Now, if we could just get more folks to try resin kits....

**Luke:** It's weakness?

**Bruce:** The major weakness of 1:48 armour is its small size and customer base, which has discouraged a number of companies from getting onto our scale, and has led to others leaving. This is especially true of the aftermarket, where a dozen firms that used to do 1:48 detail/conversion stuff have left. Recently, it has become apparent that the change in leadership at Tamiya itself may result in that company scaling back its 1:48 armour, which could certainly lead others to ignore the scale. Tamiya is the most visible model company and their presence in our scale has meant needed publicity. Take that away...

**Luke:** What plastic kit would you most like to see in 1:48 scale?

**Bruce:** The one that's really needed for our scale: a good plastic kit of the U.S. M2/M3 halftracks, both for the basic armoured infantry type and also the various gun carriages that used that chassis. The Germans have two Sd.Kfz. 251s, but the Allies have no halftracks, so that is what I think is the big need in 1:48. It would sell in good numbers as an APC, and there are at least a dozen conversion possibilities. There is a good resin kit of the M3 tank destroyer, but a lot of modellers won't touch resin kits.

**Luke:** It's been a pleasure interviewing you this month, I don't often say this, but it's guys like you that make this little hobby of ours pleasure to be in. Any parting words and advice?

**Bruce:** Do as I say, not as I do: I have a bad case of AMS myself, but I would hope that everyone who builds models for a hobby will build to please him/herself first. If you build to please others, you will not be satisfied and won't have as much fun. If you want to make kits out of the box, do it and try to advance your finishing skills; if you want to build with advanced techniques, aftermarket sets and the like, build to suit yourself. It's supposed to be fun... Like finishing a contest model at 3:00 in the morning while watching "Island of Green Slime" on the late night movie channel. Enjoy

**Luke:** You're a funny man Bruce!



# 1:48 Scale

## - A round-up of the latest news and releases



### VERLINDEN PRODUCTIONS

1:48 SCALE

WWII STEEL TREADWAY BRIDGE SYSTEM

KIT NO: 2338

The kit pieces are packed in a very sturdy box with an excellent colour photo on the top showing how the kit can be used in a diorama. The box photo also outlines the actual contents, which ensures that you know what you're getting.

Upon opening the box you are presented with some seriously large pieces of resin and it appears as though the kit may be the scaled down 1:35 version or perhaps the scaled up 1:72 version. Either way, the parts are a testament to the skill involved in casting resin parts of this size.

Also included are some basic illustrations and instructions regarding the construction of the kit as well as some ideas for potential dioramas.

The kit provides two pontoon sections and these are very well detailed with very little resin overflow on the bottom of each pontoon to be removed and nothing that can't be sorted out with a quick pass over some sand paper on a nice flat surface. The detail on the rubber boat pontoons is very well done with restrained raised ribbing around the outside of the pontoons and some well detailed girders and supporting structures cast on the top of the pontoons and better still not an air bubble or resin casting defect in sight.

The only issue with my sample was that some of the raised resin rope halter attachment point on each of the pontoons had broken off and will need to be fixed with some plastic card or similar and some old fashioned modelling skills.

The treadway pieces representing the various steel girders and supports are also well detailed with a raised tread plate finish where required. They are well cast and are embedded on top of a thin sliver of resin overflow which will have to be removed a little more carefully to ensure the smaller pieces are not damaged.

In conclusion, I feel this is a very nicely produced resin kit and will appeal to the 1:48 scale folk out there who may be looking for some alternative ways to display their latest model kits.

Highly Recommended.

Thanks to Verlinden Productions for the sample  
[www.verlindenonline.com](http://www.verlindenonline.com)

Ross Ferro

### CMK

These CMK 1:48 resin conversion sets are not new but I think from time to time we 1:48 scale modellers tend to overlook what is already on the market. It is fitting then that we review these sets for the first time here in this column.

### T-34 MODEL 1943 TYPE UZTM CONVERSION SET FOR TAMIYA KIT

1:48 SCALE

KIT NO: 8013

The parts come packaged in a neat little blister pack containing 24 nicely cast resin pieces and one turned aluminium barrel. The instructions are set out over 3 steps with well detailed parts placement drawings making it very clear as to where everything goes. A painting guide and small decal sheet is also included referencing a particular tank.

The casting quality is very good and the one-piece turret is very nicely made with extremely delicate details such as the lower turret edges exhibiting flame cut detail.

The remainder of the resin parts are also well cast. Of particular note are the four additional fuel tanks which have a nicely bent and damaged look to them and should look really nice with some careful painting.

Care will be required when removing some of the finer resin parts so as not to damage the fine detail. This will prove particularly challenging when it comes to removing the gun mantlet from its resin casting block. The gun barrel looks good and a quick test fit to the gun mantlet showed that you will need to ensure the barrel is aligned before the glue sets as the fit is a little loose. Recommended.

### T-34 MODEL 1941 TYPE SORMOVO "PANZER TURRET TYPE 2" CONVERSION SET FOR TAMIYA KIT

1:48 SCALE

ITEM NO: 8015

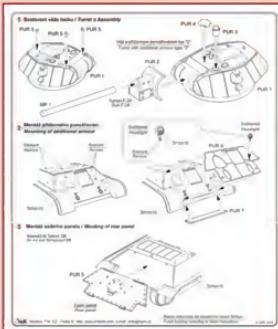
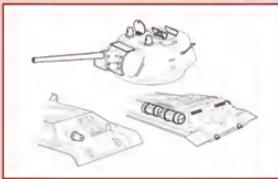
This update also comes packaged in a neat little blister pack containing 10 nicely cast resin pieces and one turned aluminium barrel. Construction is likewise set out over 3 steps with well-detailed parts placement drawings making it very clear as to where everything goes. The included painting guide and small decal sheet references two different tanks. The casting again is first rate with very nice attention to detail in terms of the supplementary armour plates on the turret and front glacis plate. The three turret lifting hooks are quite tiny and are beautifully cast in this particular smaller scale. The gun mantlet in this kit will also require careful removal from the pour plug and again the barrel is also a bit of a loose fit in the mantlet.

A quick test fit of the major parts to the Tamiya kit showed that ever thing fits well and this will help to ensure a quick and hassle free update of the target kit.

Both of these resin sets are very well produced and this will help to make the conversion process very easy and most importantly simple. Recommended.

Thanks to CMK for the review samples  
[www.cmkkits.com](http://www.cmkkits.com)

Ross Ferro



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# Next Issue

On sale 7th June 2012

## GAME OVER FOR GADDAFI

Jose Brito builds an ambitious diorama around MIG Productions' Burnt Out Modern Car.



## Pz.Bef.Wg.III Ausf.J

Gary Edmundson finishes CyberHobby's 1:35 scale Pz.Bef.Wg.III Ausf.J in winter camouflage and adds a crew.



## JAPANESE EIGHT-WHEELER

Andrew Judson presents Trumpeter's Japanese Type 96 Armoured Car.



## BELTRING PANZERS

We ran out of space last time, but in Issue 75 Zack Sex offers photo coverage of the Panzers at 2011's War and Peace Show.

### FOR YOUR SAFETY

Don't forget, when using solvents such as glues, paints, thinners and cleaning agents, always ventilate your work area thoroughly and wear a face mask.

When using power tools, side cutters or any tool that can suddenly break or create high-speed airborne particles, wear approved eye protectors with hard, clear lenses. Please always model in safety!

### ...and much more!

Due to many influencing factors, we cannot guarantee the appearance of the above projects, but we'll try our best!

# Model MILITARY INTERNATIONAL

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# The Last Post..

## BRONCO 1:35 M24 CHAFFEE EARLY PRODUCTION WITH CREW

KIT NO. CB35069

Graham Tetley takes a look at Bronco's latest 1:35 scale WWII Allied subject - the M24 Chaffee.

For approximately the last 25 years the only 1:35 scale plastic Chaffee that we have had has been the Italeri kit. Well, if you have one of those old kits you can now consign it to the stash because Bronco has now brought this vehicle right up to date.

### FIRST IMPRESSIONS ARE 'WOW'!

The level of detail is spectacular. The kit has just over 800 plastic parts, 121 on the brass fret and one length of string, and I can confidently state that this will not be a weekend build. You get the old Dragon US Army Tank Crew set added for good measure, plus stowage in the form of ammunition boxes, bags & tarpaulins, and Jerry cans.

Starting with the hull, you get a standard tub to which you add the other hull plates. Be warned that the location points are minimal and care will be needed in lining everything up. Using some nifty slide moulding, the lighting holes are moulded into the sprockets and idlers, the M2 machine gun is done as per Dragon's 'Gen2' version and tiny casting numbers are present on various hull parts. As you start to examine the instructions you soon realise that the kit provides for a fully sprung and workable suspension, although it will be quite fragile if you leave it moveable.

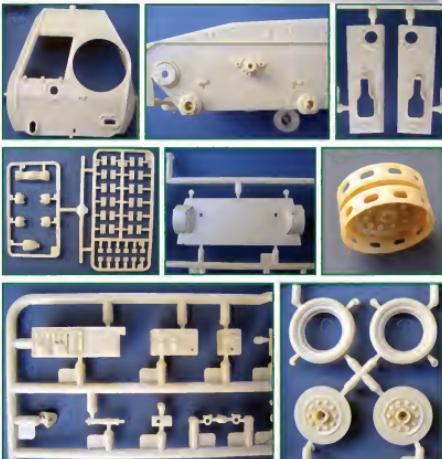
The tracks are moulded as separate links that clip together and, whilst not workable, they are remarkably detailed and strong enough to hold together whilst you glue them in place. There are many minuscule parts, perhaps the smallest are the etched casting numbers that you can place on the final drive housings. Trust me when I say that good tweezers, a steady hand and 20:20 vision are needed for this kit!

For the turret you get an almost complete interior with a fully detailed main gun, radio and traversing mechanisms. Perhaps the only main error in this kit is to do with the turret roof and the incorrect placing of a weld seam. This has been corrected, but if (like me) you have a first issue kit just contact Bronco for a corrected sprue.

The instructions come in a glossy A4 booklet with construction spread over 42 steps. The drawings are large, clear and uncluttered. Markings are provided for three vehicles, all from the US Army of March 1945.

I have already started building this kit and will be doing a full report on it shortly. For its UK asking price this is a complete package in one box. It is not an easy kit to build, but it is a stunner when completed.

Highly recommended. ■



Bronco kits are available from specialist hobby stores and online from Hannants [www.hannants.co.uk](http://www.hannants.co.uk)

## BRONCO ANNOUNCES BRITISH CHAFFEE



Bronco Models has also announced a British Army version of their 1:35 scale Chaffee.

This will provide several revisions plus a British crew figure, and will include the corrected turret.

Thanks to Bronco Models for the information  
[www.bronco-model.com/en/](http://www.bronco-model.com/en/)

## REVISED BRONCO CHAFFEE TURRET

The accuracy of the break in the Bronco Chaffee roofline where it slopes toward the front has been questioned. Bronco has now taken the extraordinary step of redesigning the part and offering the revised version to previous purchasers via local distributors with the price based on recouping packaging and material costs.

Please note that all kits produced after 24 February 2012 will include the redesigned turret.

More information will be provided as it becomes available.

# Churchill Mk. III

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D7396

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1/48  
MM



## Palm-Sized Bear

1/48 Scale Russian Heavy Tank JS-2 Model 1944 ChKZ Item 32571

Produced from December 1943, the Russian JS-2 was developed to counter German tanks such as the Tiger I and Panther and featured a formidable 122mm main gun as well as a maximum armor thickness of 120mm. It underwent several modifications during production to eventually result in what could be considered the definitive 1944 version, which was produced by the Chelyabinsk Kirov Factory (ChKZ). Tamiya's 206mm long model of this tank is one of the largest in the 1/48 Scale Military Miniature Series and accurately captures the JS-2's form, including its massive gun barrel and sloped hull glacis. The stunning cast metal surface texture on the hull and turret also contribute to a realistic presence that belies its true size.

Comes with commander figure  
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Length: 206mm

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7th Independent Guards  
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